Canadian Journal of
PUBLIC HEALTH

VOLUME 34
NUMBER 11

TORONTO
NOVEMBER, 1943

Social Security and Health Education*

Presidential Address

ADELARD GROULX, M.D., M.P.H., F.R.S.I.(E.)
Director, Department of Health of Montreal and
President, Canadian Public Health Association

MY first thought, in addressing you as President of the Association, is of the late Dr. Grant Fleming, the distinguished President whom we had so judiciously chosen and elected last year and who, in the ordinary course of events, would have spoken to you in my place tonight. Our Association had honoured itself in honouring Dr. Fleming, and it moves me very deeply to pay him the tribute which is his rightful due. Canada has lost, in Dr. Fleming, an outstanding public health authority; our Association, a most capable President; McGill University, the Director of its Department of Public Health and Preventive Medicine and a former Dean of its Faculty of Medicine; and I, like many of you, have lost a competent adviser and a loyal friend. I consider that the terms used by the Canadian Public Health Association in its official message of condolence aptly express the sentiments of all its members and I take the liberty of repeating them here:

"It was with a profound sense of loss that the members of the Canadian Public Health Association learned of the passing of Dr. Albert Grant Fleming, who died in Montreal on April 9th, after an illness of only a few months. He had assumed the presidency only in January, at a time when measures for social security, including national health insurance, of which he was a pioneer advocate, were being brought forward for consideration by Parliament. No other public health leader was so well qualified to guide the Association in its consideration of national problems."

**Presented at the wartime conference and thirty-second annual meeting of the Canadian Public Health Association, held in the Royal York Hotel, Toronto, on October 4 and 5, 1943.*

To complete Dr. Fleming's term of office, the Executive Committee of the Canadian Public Health Association asked me to succeed him. I accepted as an imperative duty, and I thank the Association most sincerely for the honour conferred upon me, upon my city and my race. I hope that I shall not be too unworthy of the confidence you have placed in me.

Never before have we heard so much about public health. The nation has its eyes upon us, and expects much from us. I do not think that we shall disappoint those who trust us. Canadian public health officers comprise a great family, united in one cause—the promotion and maintenance of public health in Canada. Alive to their responsibilities, all are marching along in full harmony towards the same goal: the prevention of disease and the prolongation of life.

In its development, preventive medicine has passed through three fundamental phases: the first, comprising sanitation chiefly; the second, embracing control of communicable diseases; and the third, the education of the people in public health. Throughout these periods of development, public health has made great strides forward. But in spite of the progress achieved, there is still much to be done. What has already been accomplished, and the pressing demand for a higher level of public health, should act as a stimulus to us in the performance of our duties.

The fact that, even in normal times, there are too many families with insufficient income to make possible a satisfactory level of public health, leads us to seek a measure of social security which will assure the prevention of illness and, when necessary, treatment facilities for all. Not a single person should be deprived of the advantages of preventive and curative medicine. In our country, as elsewhere, several measures of social security have already been put into effect, either by the federal authority or by the provinces. Some have to do with the fighting forces, and others with the public in general—such as old-age pensions, assistance to the blind, unemployment insurance, etc. It would now appear that we in Canada are entering the fourth phase of preventive medicine, which has to do with its social aspect. In this new era, preventive medicine will assume more and more importance, because of the urgency of the need and the manifold scientific discoveries available. The practising physician and the public health officer, who now work more closely together, must collaborate even more actively in the future to promote and safeguard the health of the people through the application of preventive measures and the education of the public, beginning in the home.

In reorganizing preventive medical services and public health departments, we shall have to alter our present ideas in such a way as to place more responsibility on the family doctor, who must endeavour first of all to prevent sickness and safeguard health, rather than treat and cure disease. He must be the family adviser in all matters pertaining to health, during all periods of life. Modern facilities for diagnosis and research, and the services of specialists, must be readily available to him. Upon the co-operation of the family doctor with the health authorities depends the success or the failure of certain preventive measures. He has an important part to play in the fight against

maternal and infant mortality and in the control of communicable diseases, especially diphtheria, smallpox, tuberculosis, and the venereal diseases, and should share the responsibility for certain preventive procedures which are now carried out largely by the official health department.

It is worthy of note that, in the proposals and suggestions for social security and health insurance, two associations, the Canadian Medical Association and the Canadian Public Health Association, set forth identical points of view in connection with health insurance and the principles which aim to provide adequate health supervision. Not only have both these organizations agreed as to the need for the further development of preventive medicine and public health, but they also recommend a more extensive practice of preventive medicine by the family physician. The idea "has become more prevalent in the past few years that the doctor must, in addition to prescribing treatment for his patients, supervise the health of the families which he attends."

To carry out an effective program of public health and the measures which are required to improve the health standards of the Canadian people—measures to be applied federally, provincially or municipally—every section of the country should be served by a local department of health, rural or municipal. It should be well organized, operate on a full-time basis, and be directed by a qualified staff with the financial help of the government. Health departments organized on a part-time basis are generally inadequate, yet an investigation conducted by a committee of this Association showed that in 1938 only about 50 per cent of the population of Canada was served by full-time health departments, and that in several sections of the country no provision was made for essential health services. To quote the late Dr. Grant Fleming, "the first job which faces us in Canada is to get local health departments organized to cover the country and, in order to do that, local areas will have to look to the Federal Government for financial aid."

Public health authorities recognize that a local health department should be directed by a doctor with special training in public health working full-time with the department. In this the Province of Quebec has taken the lead, and the formation of fifty-one health units in its sixty-three rural counties has been an outstanding success. Directed by qualified, full-time staffs, these health units have obtained remarkable results in centres which previously were unorganized from the standpoint of public health.

INSTRUCTION IN PUBLIC HEALTH AND PREVENTIVE MEDICINE FOR UNDERGRADUATE MEDICAL STUDENTS

The teaching of public health and preventive medicine, both to medical students and to the public, should be of supreme interest to us in solving existing health problems and in bringing about the proposed measures of social security.

The extension of public health work requires more intensive preparation by the doctor who will be called upon to include a much larger measure of preventive medicine in his practice. It is not my intention to pose as an expert on university training, but I should like to set forth a few personal

views. At this phase in the evolution of medicine and public health, at these cross-roads in our medical history, government and public authorities throughout the country are realizing the necessity for reorganizing medical training. I do not think that I am guilty of indiscretion when I say that one provincial government required that a certain university, which had asked for assistance, completely revise its curriculum in medicine and adapt it to new conditions in order to train doctors in a better understanding of their obligations to the public.

Although they will require less intensive preparation than do those medical graduates who plan to devote themselves solely to public health, it is essential that all undergraduate medical students should receive a general theoretical and practical knowledge of public health. This instruction should, I believe, be spread throughout the university curriculum as part of the medical course, and should be presented in a stated number of courses, graded and progressive, in each year.

The course in public health and preventive medicine, supplemented by practical demonstrations and visits, should have a bearing upon general and individual health; it should stress the importance of public health, outline the organization of public health departments, clarify health legislation, etc. Study of the federal, provincial and municipal health laws will acquaint the doctor of tomorrow with his responsibility to the individual and to society. The study of important social and health problems, such as maternal mortality, infant mortality, tuberculosis, cancer, venereal diseases, etc., will enable him to render the services which the public will demand of him.

In broad terms, a program of study in public health for students in medicine might comprise a series of courses under the direction of specialists in such subjects as: food and nutrition, general and personal hygiene, immunology and bacteriology, vital statistics, epidemiology and communicable diseases, tuberculosis, social hygiene, public health administration and health legislation, school medical inspection, dental hygiene, mental hygiene and comparative psychology, sanitary engineering and industrial hygiene.

Under the general supervision of the dean of the Medical Faculty, the organization and co-ordination of such a course should be entrusted to the professor of public health who, at the same time, would be director of the department teaching this subject in the university. In addition to giving courses in the faculty, his duties would consist of directing and co-ordinating the teaching of hygiene, and in co-operating with the other professors of the Medical Faculty to insure that the teaching in the various departments covered the preventive and social aspects of medicine as well as diagnosis and treatment. He would also direct the teaching of public health in other faculties where such teaching is appropriate.

POST-GRADUATE TRAINING IN PUBLIC HEALTH

To maintain an adequate department of health organized on a full-time basis, it is essential to have a staff qualified by special training in public health. The Rockefeller Foundation attaches great importance to the teaching

of public health in universities and to the special qualifications of public health personnel.

I shall not, at this point, enter into an extensive discussion of the content of these post-graduate courses which has already been studied and set forth by our large universities. However, basing my conclusions on what has been accomplished here and at Johns Hopkins University and elsewhere, I have presumed to make some suggestions to university authorities at home who did me the honour of consulting me.

A basic post-graduate course in public health for physicians should comprise bacteriology, immunology and parasitology, vital statistics, epidemiology and the study of communicable diseases, the organization and administration of public health, maternal and infant health, school medical inspection, mental hygiene, sanitary engineering, chemistry, nutrition, industrial hygiene, physiological hygiene, etc.

It is important, too, that dentists, nurses and veterinarians, as well as physicians, should secure qualifications in public health as given by certain universities. Sanitary inspectors may secure the Certificate in Sanitary Inspection (Canada) granted by the Canadian Public Health Association.

In order to assure special qualifications in public health and in some associated fields, governments should make provision for post-graduate study through the granting of fellowships. This recommendation was made by the Canadian Public Health Association to the Special Committee on Social Security of the House of Commons last May. For many years the Rockefeller Foundation has placed several fellowships at the disposal of the provincial departments of health. In Quebec this has greatly facilitated the training of medical directors for the health units. The City of Montreal has been fortunate in being awarded several fellowships, and annually since 1931 the City itself has awarded scholarships in foreign or local universities to some of its doctors, engineers and nurses. I shall take the liberty of repeating what I said in an address here last year: that of the staff of the Montreal Health Department "about twenty-five doctors, engineers and nurses have benefited from scholarships awarded either by the City of Montreal itself or by the Rockefeller Foundation, for studies in Canadian or American universities, chiefly Toronto, Harvard, and Johns Hopkins. Some others have obtained their D.P.H. from our two local universities, Montreal and McGill. A number of our nurses have been qualified in nursing, and the majority of our inspectors are veterinarians or hold a C.S.I.(C.) certificate."

The attitude of the civic administrators of Montreal in their endeavour to secure a qualified staff was praised in a paper given before the Royal Commission studying relations between the Dominion and the Provinces:

"Perfectly competent and trained staffs for health units are extremely rare in Canada. Certain provinces have made great advances by sending their health officers to schools of public health so as to enable them to obtain thorough knowledge in matters of social health; for its part, the City of Montreal deserves the highest praise in this connection. The need for com-

petent persons is one which is felt in most municipalities in so far as doctors and nurses are concerned."

I should like to stress also the necessity that exists for qualified members of a health department to continue their studies. Medical journals and official health bulletins serve as indispensable sources of information. Membership should be maintained in medical societies and scientific organizations such as the Canadian Public Health Association and the American Public Health Association. Conventions and meetings enable the worker to keep in touch with recent scientific discoveries in the various fields of medicine and promote the expansion of medical science. Following the example of the Ontario Health Officers Association, public health officials in my province have formed the Society of Hygiene and Preventive Medicine of the Province of Quebec. The first president is Dr. Jean Grégoire, Deputy Minister of Health of the Province and former president of this Association.

HEALTH EDUCATION OF THE PUBLIC

In line with the advancement of public health, education of the people is assuming greater importance. An intelligent interest in health must be aroused and maintained. Much has been done in this direction by our various official and voluntary organizations. Ideas in health promotion are daily attracting more and more interest. The people are becoming aware of public health and are taking greater precautions against illness. Already extensive campaigns have been carried on—such, for example, as that for proper nutrition. There is, however, a great deal more to be done. Needs born of the times, and others which will arise after the war, are impelling us towards new measures. The public must, through proper direction, be informed of the measures to be taken for their benefit and their full co-operation must be secured. Health education of the public is so important that it calls for the creation, as has been done in many places, of a special division or section in the department of health under the direction of an authority who devotes all his time to this work. Every means to reach the public should be utilized—health bulletins, pamphlets and other publications, posters, newspapers and periodicals, the radio, public meetings, exhibits and motion pictures. This educational effort must begin in the home, with the work of the visiting nurse, and continue at school, where the child should be taught to live according to the rules of health.

The Social Aspects of Our Syphilis Problem

GRANT FLEMING, M.C., M.D., D.P.H., F.R.C.P.(C.)

The Editorial Board gratefully acknowledges its indebtedness to CAMSI, the official journal of the Canadian Association of Medical Students and Internes, for permission to publish this paper by the late Doctor Fleming, in whose untimely death in April 1943 public health in Canada suffered an irreparable loss. At the time of his death, he was Strathcona Professor of Public Health and Preventive Medicine, McGill University; Medical Director of The Bell Telephone Company of Canada; and President of the Canadian Public Health Association.

THE venereal diseases constitute the most important communicable-disease problem facing society today. Syphilis is something that concerns the community because syphilis is a communicable disease affecting large numbers, and its control requires organization with legal powers to make community action effective.

It took a world war to bring the discussion of the venereal disease situation out into the open in Canada. The result was a public awakening which played an important part in the creation of a Department of National Health in 1919, and led to a Dominion subsidy for the development of venereal-disease control programs by the provinces.

I do not intend to take time to review the history of syphilis but rather to pass at once to a consideration of the problem as it exists today. To get an idea of its magnitude, we might, first of all, enquire as to the incidence of syphilis.

The Surgeon-General of the United States Public Health Service has stated that "syphilis strikes one out of every ten adults." This estimate was, according to a publication of the United States Public Health Service, "prepared with the greatest of precision from voluminous material", and "is based on the annual attack rate applied to 100,000 individuals born alive and followed throughout life. Although the annual attack rate seems low, when cumulated so as to indicate the probability of acquiring syphilis by a given age, it is found that 10,000 people, before the attainment of the fiftieth year of life, will have acquired syphilis out of every 100,000 born alive."

The one-day surveys made in Toronto, Vancouver and Ottawa show over 5 persons per thousand of population actually under treatment for syphilis on the day of the survey. The report of the venereal disease clinics in Canada for 1938 shows 9,412 cases continuing treatment from previous years, with 7,249 new cases admitted during the year; a total of 16,661 cases of syphilis under treatment during that year.

Dr. Jules Archambault, Chief of the Division of Venereal Diseases in the Ministry of Health of the Province of Quebec, estimates that 6 per cent of the urban population and 0.2 per cent of the rural population are suffering from syphilis.

Cormia, in a recent publication, concludes, on the evidence available, that 5 per cent of the population of Canada is infected with syphilis.

Putting all this information together, it becomes obvious that syphilis is a widespread infection which, because of its chronicity, makes it the most prevalent of all the communicable diseases.

From a community point of view, syphilis is two diseases. Early syphilis is highly infectious, and it is during this early period that the patient is most dangerous to others as a source of infection. Late syphilis is the period when the disease is destructive to the individual.

Syphilis kills. It ranks with the four leading causes of death. Syphilis, when passed from the mother to her unborn child, causes miscarriages, stillbirths and congenital infections. In a group of untreated syphilitic women, not more than 17 per cent will give birth to living non-syphilitic children. Between 5 and 10 per cent of new syphilitic infections are congenital.

Syphilis markedly reduces the average expectancy of life. This is explained by the fact that from 10 to 15 per cent of untreated or inadequately treated patients develop cardiovascular conditions, while over 15 per cent of untreated syphilitics develop symptomatic neurosyphilis.

Add to this the fact that 15 per cent of all blindness is due to syphilis, and that 10 per cent of first male admissions to mental hospitals are cases of general paresis, and you have some idea of the disabilities and suffering, to say nothing of the social implications as indicated by loss of earning power and by broken homes, which follow in the wake of this disease.

Syphilis strikes in the years when a man should be at the peak of his earning powers and productivity. It does not spare the industrial leader any more than it does the unskilled labourer. Stokes and Ingraham arraign syphilis in these terms of social significance: "The person who has a syphilitic infection may fail his family at the critical juncture of its life history; he may fail his fellow-workers in an executive post; he may fail the public at the head of a fast-moving train; he may fail a co-worker at a critical or dangerous point in industrial machine and other processing; he may even fail a patient as his physician or surgeon."

Syphilis is an expensive disease, and the cost is borne by the community rather than the affected individual. A study made in New York State showed that over 1,000 persons suffering from syphilis of the central nervous system were being maintained in mental hospitals at the expense of the state. The annual cost of maintenance, plus the present worth of estimated loss of net future earnings, gave a grand total of $12,600,000. Cormia places the cost of syphilis for the City of Montreal alone at over $300,000 for one year. This cost is largely due to the hospitalization of patients with late syphilis.

The problem of syphilis can be approached as one of communicable-disease control. We know the specific cause, we have available valuable aids in diagnosis, we know how syphilis is spread, and we have at our disposal therapeutic resources which will render the patient non-infectious, thus breaking the chain of spread. Through the application of this knowl-

edge on a community-wide basis, over the years, we should be able to bring syphilis under control.

Unfortunately, from a communicable-disease control point of view, the incidence of syphilis is one of the products of the great unsolved problem of modern civilization—the relation of the sexes. Abolish syphilis and the problem still remains. The incidence of venereal disease in any given area is an index to the sexual promiscuity of the population. The almost unbelievable rapidity of the spread of syphilis throughout Europe during the years following 1493 tells us more plainly than anything else could what was the sexual life of that period. It is the sexually promiscuous who keep the disease alive, for in others the infection dies with them.

The earliest control efforts were directed towards the suppression of prostitution. What was achieved by that means, then and since through similar efforts, is well summed up by Parran in these words: "No system has been devised that will be obeyed either by those who profit from prostitution or by the women themselves. Even the mildest supervision interferes with profits, and fails to reach more than a small fraction of those who live by prostitution. Moreover, not even the most skilful physician can say with certainty, from any known method of routine inspection, that any given prostitute is non-infectious or that she will remain so for an hour. Medical inspection of the prostitute never has succeeded anywhere in reducing syphilis."

There are many serious social problems closely related to health and disease that call for attention and action. One such problem is commercialized prostitution. You will find a considerable difference of opinion as to how far the medical profession and the public health authority should go in attempting to deal with such social conditions. Let us consider the matter from the point of view of syphilis control.

No doubt the medical profession is responsible for the medical care of syphilitic patients. As a communicable-disease problem, the public health authority has a definite legal responsibility to protect the community.

Prenatal care must take syphilis into account. It is the unquestionable responsibility of the physician supervising the expectant mother to include, in his supervision, routine serological tests for syphilis, and to see that adequate treatment is provided in all cases with positive serological findings. It is only by following a routine that all cases will be found. To omit the serological test is inexcusable when we know that the history given by the patient and the physical examination are usually of no value in revealing latent syphilis. We know the direct relationship between the period of pregnancy when treatment begins and the likelihood of the birth of a living non-syphilitic child.

It has been shown that the incidence of syphilis can be reduced through medical and public health procedures without changing the sexual habits of the population. The surveys made in Toronto indicate a 50 per cent reduction in early syphilis, comparing the year 1937 with 1929. It seems

as though in Canada as elsewhere, when a real effort has been made over a period of years, considerable progress has been made in reducing the number of new syphilitic infections.

We would all agree that prevention is more desirable than cure. No method has as yet been devised to immunize the population against syphilis. The only method put forward is that of prophylaxis, by which is meant the introduction of a chemical or mechanical barrier against the specific infecting organism during sexual contact. Nelson states that "It is as much a medical procedure as the wearing of a face-mask at a surgical operation, or the instillation of silver nitrate into a new-born baby's eyes." Those who favour prophylaxis point to the results obtained in the armed forces. No matter whether one approves or disapproves of prophylaxis on moral or other grounds, the fact is that prophylaxis is effective only in organized groups, such as the army, where the enforcement of penalties is possible. Prophylaxis has never been used with any appreciable results by a civil population even where there has been no opposition to public education in the use of the procedure. Failure may be due to the optimism which reigns supreme, or to the extra ounce of alcohol so often referred to by Colonel Harrison as blunting intelligence and promptness at the time when prophylaxis must be used if it is to be effective.

Organized public health has, in general, fought shy of prophylaxis because of the strong opposition of those who fear what would happen "if people are taught that they may have their sexual pleasure without fear of unhappy consequences." The health department would be ill-advised to jeopardize its whole program through support of a procedure that is opposed by strong moral and religious beliefs. The private practitioner of medicine must decide for himself as to what he will do in an individual case. It is his responsibility and no one can make the decision for him.

There are those who would solve the syphilis problem through sex education. Some would place the responsibility for this teaching with the parents, others with the school. Personally, I am not at all sure what is meant by sex education. Is it the physiology of reproduction to which are added some notions of venereal disease?

In any case, I do not believe that sex, an integral part of the individual, is something to be considered apart. The purpose of education is to give the individual a fair opportunity for complete growth and development: physical, intellectual, emotional, spiritual and social. With adolescence comes a strong emotional reaction to sex. It is easier for the adolescent if he knows the facts, but that in itself is not enough. Education should include a discussion of social relations, of marriage and of the family. If all these are taken into consideration, sex will be taken care of because it is part of the whole. Unless, through sound education, the child and, later, the adult develops and maintains high ideals and attitudes which are expressed in socially desirable behaviour, education has failed. A knowledge of anatomy, physiology, reproduction and venereal disease does not

build character. Fear may be a temporary deterrent but it is a weak foundation upon which to build, and alcohol releases the brake of fear.

I believe that our medical responsibility is a part of our general responsibility to help parents and others to an understanding of normal growth and development and of human behaviour, so that sound guidance may be given and understanding replace intolerance.

I have wandered somewhat but I did so deliberately because it is important that we consider carefully just what our responsibilities are, as individuals and as a professional group, in these matters which are closely related to but not a generally accepted part of medical practice.

The community program for syphilis control begins with case-finding. The health department which is responsible for the program must depend upon the practitioners of medicine for the reporting of cases.

If syphilis is to be found, it must be looked for, and this, in general terms, means the examination of known contacts and serological surveys.

Syphilis is a disease of the family. When a case is diagnosed, two questions should be asked and an answer required: From whom was the disease contracted? To whom may it have been spread?

Greater community responsibility rests upon the private practitioner in syphilis control than in any other disease. Under practically all venereal-disease legislation, reporting of cases is by numbers only as long as the patient continues treatment and conducts himself in such a manner as to prevent the spread of the disease. This means that when the private practitioner accepts responsibility for the treatment of a case, he cannot evade the social responsibility of securing the examination of source and contacts. He cannot argue that his responsibility is limited solely to the treatment of his patient. Medicine is one of the social resources of mankind, and the practitioner of medicine must accept his social responsibilities to the community. Let us be quite frank about it. It is the failure of the private practitioner to meet his community responsibilities that necessitates the provision of clinic services in many cases.

The most important group for routine serological investigation is that of the expectant mothers. In a recent Philadelphia survey of such a group, 4.4 per cent positives were found on routine examination as compared with 0.06 per cent when serological tests were made only when apparently indicated. In other words, 72 out of 73 cases are missed when routine examinations are not made. Every patient in hospital or inmate of an institution should be tested serologically. The same is true of industrial groups, and as a part of all health examinations. In the United States, many states have enacted laws requiring serological tests before the issue of marriage licences, and, on birth registration forms, a statement of the result of such a test made on the mother; if the test is not made, the reason for failure to do so must be given.

The finding of cases is of value only if the infected person is placed under treatment to break the chain of infection, to cure when possible, and at least to check the progress of the disease.

All this implies the provision of facilities, either in clinics or in the office of the private practitioner, together with laboratory facilities. Our need is not for more clinics but for better clinics, located at the most readily accessible points and open at the hours best suited to meet the convenience of the patients. Such clinics require money to secure the necessary qualified staff and to provide adequate remuneration. There is no reason why practitioners of medicine should give their time gratuitously to provide a service which it is the responsibility of the state to provide. There is no reason either why they should give hours of their time for a small honorarium. They should be adequately paid for the service they give.

This brings us to the interesting question of Syphilis and the Law, which is a live one in Quebec at the present time. All the other provinces have already enacted venereal disease-control legislation. We also have the example of the legislation in the United States regarding venereal disease, and marriage and pregnancy.

Public health laws are presumably the expression of public opinion. The legislation for syphilis control should be drafted by those familiar with the disease and the practicability of treatment control. Our experience has convinced most of us of the need for legal authority, not with any idea of replacing education by compulsion, but rather to supplement education and to have power to deal with the irresponsible intractable group. In Great Britain and the Netherlands, they have opposed the idea of law enforcement, relying solely upon education and adequate, attractive free clinics, with, it must be said, results that compare favourably with those countries where laws exist and are used.

Syphilis-control legislation should express itself in broad terms, leaving considerable discretion to the medical officer of health because of the differences between individual patients. It is not possible to standardize by law patients, disease, methods of treatment, or interpretation of serological findings.

But the law can require reporting, the treatment of infectious cases by licensed medical practitioners, the examination of known contacts, without endangering the rights of the individual citizens.

It should be clearly understood that the syphilitic is not a criminal because he has syphilis. The law is for the control of a communicable disease, not for the punishment of a moral delinquent. I do not believe that the court sentencing a person accused of some crime should be informed as to the presence of a venereal infection, lest such information prejudice the court.

Discriminatory legislation should be avoided. Why require examination for venereal disease of food handlers when the disease is not spread by food handlers as such? What the medical officer of health requires are broad powers which he can use with discrimination to prevent the spread of disease.

Stokes and Ingraham have pointed out "that legislation calculated to make the recognition of a syphilitic infection a basis for conduct of any

kind cannot be framed so as to place sole or even major dependence on any laboratory procedure, including a blood test. It is essential that the individual autonomy and judgment of the physician be invoked and preserved."

This opinion, in which I believe we would concur, places a great responsibility on the physician while it warns against hasty legislation and the danger of establishing serological results as legal standards. It defeats the purpose of the law if it is used to exclude from employment those with positive serological findings who are taking treatment or who do not require treatment. Indeed, the results of blood tests should be regarded confidentially; there is no reason why they should be communicated to the employer. All the employer needs to know is that his employee is fit for his work, and that he is not a danger to other employees or to the customers.

No control program can succeed unless it is supported by an informed public opinion. Hence the importance of public education. The need for such education is revealed by a recent survey made in thirty-five cities in the United States. Sixty-five per cent of those described as "the man on the street" said they would seek treatment for venereal disease at a drug-store or else treat themselves. This shows a surprising ignorance of the gravity of syphilis and the importance of proper treatment.

The education of the public is the joint responsibility of the public health authority and the medical profession working together. The public should know the nature of syphilis, how it is spread, why treatment is important and where treatment can be secured. The objective of the educational program is to bring infected persons under proper treatment. If the public know the facts, they will demand that proper treatment facilities be provided. The medical profession should take a major part in promoting public education.

I can close my remarks on an optimistic note. Good progress has been made in all areas where satisfactory provision is made for free clinics, readily available at suitable hours to all comers, irrespective of their financial status, with competent, well-paid staffs. This progress can be accelerated by an extension of services. Is it not the responsibility of the medical profession to give leadership in this matter? Syphilis can be controlled if we are prepared to make the effort required to conquer instead of continuing to suffer as victims.

Venereal Disease Education in Industry

H. CECIL RHODES
Educational Supervisor
Division of Venereal Disease Control
Provincial Board of Health, British Columbia

AND

D. E. H. CLEVELAND, M.D.
Acting Director
Division of Venereal Disease Control
Provincial Board of Health, British Columbia

THE possibility of securing the co-operation of industry for the extension of the venereal disease educational program in British Columbia had been under consideration by the Provincial Board of Health for some time time prior to December 1942. It was an attractive prospect indeed, for the well-knit facilities of industrial organization could assure a large-scale, economical distribution of literature and other educational materials. One major difficulty, however, presented itself: the magnitude of the undertaking would necessitate very considerable assistance.

December 1942 is mentioned because, during the early part of that month, the Vancouver Junior Board of Trade placed the services of its Health Committee at the disposal of the Provincial Board of Health for the development of any phase of venereal disease education considered practicable. The Board's attitude was summed up in a sentence: venereal disease constituted a serious threat to the economic and social welfare of the community — especially during war time — and they felt they had a definite responsibility as a community service organization to help combat it.

The proposed plan for an extensive industrial educational program was outlined to the Junior Board of Trade, whereupon they promptly offered the full support of their entire organization for an "all-out" campaign.* Thus was "Industrial Health Education Week" launched.

Object of Campaign

It was decided that the campaign would be directed towards making essential factual information about venereal disease and its control available to employed workers and their families, on as wide a scale as possible; and publicizing the seriousness of the venereal disease problem in order to arouse general public support for measures designed to combat the disease.

**It was felt that a campaign of short duration was best suited to the resources of a voluntary group such as the Junior Board of Trade, and that such a campaign would open up further avenues for the long-range educational program carried on by the Provincial Board of Health. This proved to be an accurate assumption.*

WORKING AGREEMENT

In order to avoid possible mistakes or misunderstandings, responsibilities and limitations were defined clearly in a working agreement which included these points:

(*a*) The Vancouver Junior Board of Trade would sponsor and organize the campaign, and would undertake to secure the active co-operation of associated Junior Boards of Trade and Chambers of Commerce throughout the province, to assure complete coverage.

(*b*) The Provincial Board of Health (through its Division of Venereal Disease Control) would defray all expenses incurred in connection with the campaign, subject to (c).

(*c*) The Division of Venereal Disease Control would exercise complete authority over all proposed expenditures and would be represented on the co-ordinating committee by its educational supervisor.

The soundness of this arrangement was demonstrated by the highly efficient and harmonious relationship which characterized every phase of the campaign.

PRELIMINARY ORGANIZATION

"Industrial Health Education Week" was planned originally for February 1st to 6th,* but the Christmas holiday season interfered with the working schedule, and it was found necessary to change this to February 15th to 20th.

The slogan "Fitness for Victory" was adopted, and used throughout the campaign on all publicity releases.

One of the first decisions to be made concerned the direction of the campaign, for it was apparent that a co-ordinating committee would have to be formed to initiate and supervise all major activities. A small key committee comprising the president and two or three executive members of the Vancouver Junior Board of Trade, the chairman of its Health Committee, and the educational supervisor of the Division of Venereal Disease Control undertook this responsibility. The committee was assisted, of course, by sub-committee chairmen assigned to various duties.

An "Outline of Proposed Program for Industrial Health Education Week" was prepared in an attractive mimeographed booklet form for the guidance of the co-ordinating committee and associated sponsor groups. The chief points covered in this outline were: (1) Date of campaign; (2) slogan; (3) purpose of program; (4) endorsement of campaign by high government officials, representative employer and employee organizations, community welfare groups, churches, etc.; (5) plan for distribution of literature and posters through industry; (6) publicity methods; (7) basis of co-operation with associated Junior Boards of Trade and Junior Chambers of Commerce; and (8) internal educational program (for sponsor groups).

INTERNAL EDUCATION

It was anticipated that the full importance of the proposed campaign would not be appreciated thoroughly by some of the members of the Junior Board of Trade, nor would any great enthusiasm be in evidence unless an

*1943.

intensive educational program was carried out *within* the organization. This was done over a period of several weeks, during which time each member received booklets dealing with all phases of the venereal disease problem, and stimulating "pep talks" were given at luncheons. A noticeable change took place as the campaign progressed. With few exceptions, lukewarm attitudes disappeared.

CO-OPERATING SPONSORS

As mentioned previously, the organizing of the campaign on a province-wide basis required the support of strategically located associate organizations. To secure this support it was necessary to "sell" the groups on the importance and practicability of the campaign. This was accomplished by these means:

(1) A preliminary letter was written to each member group by the Regional Director of British Columbia Junior Boards of Trade (and Chambers of Commerce) explaining the plan for the proposed campaign and urging full support.
(2) A delegation of three members of the co-ordinating committee visited all member groups within a radius of 500 miles of Vancouver.
(3) Where no Junior Board of Trade existed in a community, a *young men's* service club whose prestige and record of community service were sound, was invited to co-operate.

This personal visit made it possible to deal effectively with situations and attitudes which could not have been clarified by correspondence alone. Some of the points raised were:

(*a*) "Is a 'V. D. campaign' a suitable project for a club like ours?"
(*b*) "Aren't we likely to get 'slapped down' if we sponsor this?"
(*c*) "Isn't it better to segregate and medically inspect prostitutes than attempt the 'futile' task of suppressing commercialized prostitution?"

It should be noted that these and other questions in no way imply lack of appreciation of the seriousness of the venereal disease problem or desire to help on the part of the groups approached. They were (in some cases) simply apprehensive about public reactions in their communities.

Being able to answer all objections *on the spot* and by working out a co-operative plan of action, the backing of eighteen organizations was obtained. These included thirteen Junior Boards of Trade or Junior Chambers of Commerce, four Kinsmen Clubs, and one Lions Club. The Alumni Society of the University of British Columbia also co-operated.

Each group was given full jurisdiction over an area which would normally be considered within its sphere of influence, and handled all detail (including publicity arrangements) in that area.

MAILING LIST

Essential to the success of the campaign was an up-to-date mailing list of all industrial organizations in the province. This was made possible through the generous co-operation of the Workmen's Compensation Board, which prepared a complete list of all firms known to it, along with the estimated number of employees.

This list was divided into three sections: Class "A" (250 employees or over); Class "B" (25 to 250 employees); Class "C" (10 to 25 employees).

The firms in each of these categories were listed under "jurisdictions" so that each sponsoring group knew which ones it had to contact. In addition to this the sponsoring groups were asked to check the list to make certain that, from their knowledge of the district, no firms had been overlooked; they were also invited to add the names of firms which employed fewer than ten persons but were considered important enough to be included.

ENDORSEMENTS

The Provincial Board of Health in British Columbia has carried on an aggressive educational program for several years, and for this reason it was believed that favourable public acceptance of the campaign was assured. It was, however, recognized that endorsement by prominent representative citizens and organizations would stimulate general interest and support.

The most valuable single endorsement of the campaign was received from the Hon. the Premier, Mr. John Hart. Arrangements were made for a *fully personalized letter* to be sent out to each of the ranking executives of the larger industries (some two hundred), in which the importance of the fight against venereal disease was stressed, and the hope expressed that sympathetic consideration would be given to the Junior Board of Trade (or Kinsmen Club, etc.) representative when he called. Other important endorsements were received from mayors, church dignitaries, union officials, parent-teacher associations, boards of trade and military leaders. The full backing of the Hon. the Minister of Labor, Mr. Geo. S. Pearson, and the Hon. the Attorney-General, Mr. R. L. Maitland, was also extended to the campaign.

CHOICE OF LITERATURE

For this campaign it was considered necessary to select literature capable of doing three things:

(*a*) Provide essential factual information in a form readily understood by, and interesting to the majority of citizens.
(*b*) Create enlightened public opinion against commercialized prostitution and stimulate support for organized repressive measures.
(*c*) Create an acceptance of the need for community action in dealing with the venereal disease problem.

The following were selected:

"Facts About Syphilis"

A ten-page booklet issued originally by a large insurance company and modified slightly and reprinted (with permission) by the Provincial Board of Health. This was considered the most generally acceptable "all-purpose" booklet available at the time for distribution to employees.

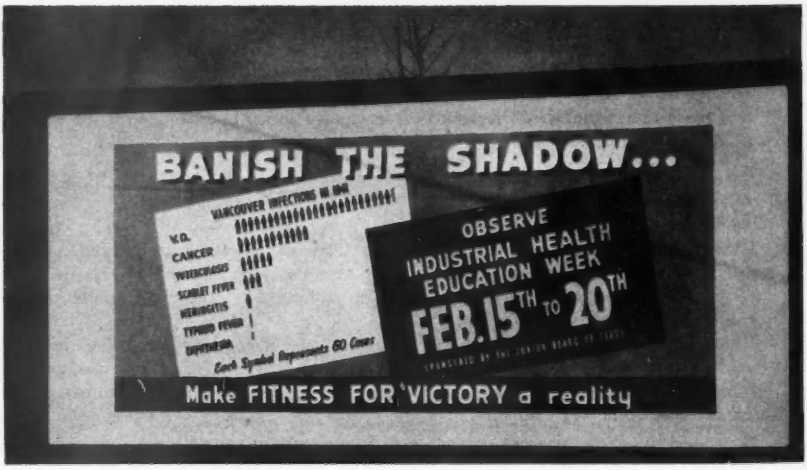
Note: To prevent possible resentment, on the part of employees, at being given this booklet, an insert was prepared which explained briefly the importance and purpose of the campaign. The effectiveness of this may be judged by the fact that no complaints were received from any company.

"Hidden Costs in Industry"

The American Social Hygiene Association's excellent booklet bearing this title was modified extensively to meet local needs. Its distribution was largely to employers.

Junior Trade Board Launches Industrial Health Week Campaign to Fight Venereal Disease
Venereal Disease is the Enemy, Too - It Sabotages a Nation at War
How V.D. Is Checked
Fight Organized Prostitution
Facts About Syphilis

Specimens of news items and articles which appeared in Vancouver newspapers during the "Health Week". (In addition to this, a number of editorials were printed.)



One of seventeen billboards in strategic locations in Vancouver.

"Why Let It Burn?"

Another booklet of the American Social Hygiene Association, which has been used widely in British Columbia to combat commercialized prostitution, was distributed on a selective basis.

POSTERS

Sets of special coloured posters were distributed during the week of the campaign.

PUBLICITY

Newspaper: The full co-operation of the press was secured. News items, editorial support and advertisements (ranging from quarter page to full page) appeared in most newspapers throughout the province. It is interesting to note that the advertising managers of the metropolitan dailies opposed the possible commercialization of the campaign, and recommended that only a few carefully chosen, dignified advertisements be prepared. This advice was followed, with excellent results. One large department store prepared a full-page advertisement which created widespread favourable comment and resulted in several hundred letters being sent to the Junior Board of Trade office for free literature.

Radio: Due to technical difficulties the radio was not used to full advantage in this campaign. A province-wide broadcast of the address of Dr. G. F. Amyot, Provincial Health Officer, at the opening campaign luncheon of the Junior Board of Trade, was arranged, through the courtesy of the Canadian Broadcasting Corporation.

Billboards: Space on seventeen billboards in the City of Vancouver was donated by a large outdoor advertising firm, for a special message regarding "Industrial Health Education Week".

Theatre Trailers: A 45-second moving picture trailer was released throughout the province through the co-operation of two leading theatre chains.

Street-Car Cards: The electric railway company in Vancouver publicized "Industrial Health Education Week" and the slogan "Fitness for Victory" on its "events of the week" street car card.

Window Displays: A large department store and a number of smaller stores arranged special window displays.

DISTRIBUTION OF LITERATURE

The focal point of the campaign was the distribution of literature. All other activities were incidental or complementary to this objective. The basic plan for the accomplishment of this objective was (chronologically) as follows:

Class "A" Group:

(*a*) Personal letter from Premier to the ranking executive of the firm. Sent about ten days prior to campaign week.

(*b*) *Personalized* multigraphed letter from the president of the sponsoring organization to the recipients of the Premier's letter. This was sent out a day after the first one, and asked for the co-operation of the firm, etc. It mentioned further that a representative would call within a day or so to explain all details of the campaign in full. A copy of each booklet, etc., was enclosed.

The Blackest Blot on our War and Community Effort must be wiped out!
venereal disease
HERE ARE THE FACTS IN BRIEF:
HELP STOP LOST MAN-HOURS
V D

Specimens of quarter- and full-page advertisements which appeared in Vancouver newspapers.

(*c*) A specially trained group of men called on these executives. A card, containing information for the guidance of the representative and blanks to be completed (check on number of employees, facilities for film showing, etc.) was made out for each call.

(*d*) Literature was delivered to the firm in time for distribution during "Industrial Health Education Week".

Class "B" Group:

(*a*) A personalized letter from the president of the sponsoring group was sent to the head of each firm in this group.
Enclosed with this letter were:
1. A copy of a letter from the Premier to the president of the sponsoring group, commending the effort.
2. Specimen copies of literature.
3. A printed form suggesting how the literature and posters might best be distributed, and with detachable coupon for securing additional materials or request for films, etc.

(*b*) Literature (estimated requirements) sent simultaneously with letter.
Note: No personal contact made.

Class "C" Group:

Because of the large number of firms involved it was not found practicable to personalize the letter other than to address it to "The Manager, Blank Company, etc." and to make the salutation "Dear Sir".

Procedure otherwise same as for the Class "B" Group.

Nearly half a million pieces of literature were distributed during this campaign. It is estimated that 190,000 employed persons received booklets and that these were read by many others (associates, family, etc.).

GENERAL

Space prevents a description of the ramifications of the campaign, but mention must be made of the important roles played by film committees, speakers committees, literature-packaging committees (a colossal task for a voluntary organization) and many others involved in the campaign.

CONCLUSION

The Provincial Board of Health and the citizens of British Columbia owe much to the Vancouver Junior Board of Trade and associated groups for their active promotion of venereal disease education. It is difficult to measure the results of this particular campaign. One cannot even hazard a guess as to the number of infections which may be averted, the number of babies assured their heritage of being born disease-free, the number of marriages saved from unhappy termination, the lowered costs in industry, the improvement in community conditions, as a result of the campaign and subsequent educational measures. One can be sure, however, that the courageous action of these young men will produce lasting wholesome and beneficial effects in their respective communities.

EDITOR'S NOTE: *This article is an indication of what was accomplished during "Industrial Health Education Week" in British Columbia, rather than a detailed description. Readers who are interested in having a more complete outline of the techniques practised and the experiences gained in this campaign are invited to write to the Division of Venereal Disease Control, Provincial Board of Health, 2700 Laurel Street, Vancouver, B.C.*

The Preparation and Preservation of Typhoid Suspensions for the V Agglutination Test*

J.-M. DESRANLEAU, B.A., L.Sc.
Assistant Bacteriologist
Division of Laboratories, Ministry of Health of Quebec

IT would seem to be established that V agglutination tests have a place in the identification of typhoid carriers. The practical difficulties in the adoption of V agglutination tests for this purpose have been: (a) lability of the V antigen, and (b) the necessity of absorbing H and O antibodies from the serum which is to be tested.

The use of fresh, living cultures is hardly practicable in the routine diagnostic laboratory.

It is well known that, in saline suspension, agglutinability by V serum rapidly disappears and that the organisms become progressively more agglutinable by O serum.

Felix and Pitt reported in 1936 that alcohol "almost annulled or at least very much reduced" agglutinability by V serum.

However, Peluffo (1) recently has briefly reported observations on the preservation of V antigen in absolute alcohol and on drying; Peluffo's observations are not in accord with previous reports.

Commencing in February 1942 we undertook observations with a view to evolving a practicable method of preparing stable V suspensions for use in slide agglutination tests.

Materials

The strain of *E. typhosa*, type C, of Craigie (2) was used in the preparation of suspensions because it has been shown to be very readily agglutinated by V serum.

The V serum employed was obtained from a rabbit inoculated with the strain of *E. typhosa* Vi I; it was absorbed with the strain O 901. The O serum was secured by inoculation of a rabbit with the strain O 901. These sera were diluted with a solution of pH 7.0, buffered with sodium phosphates, and containing 0.1 per cent sodium chloride and 50 per cent glycerol.

The majority of the results obtained were controlled by additional tests with *E. typhosa* V, O and H sera issued by the Standards Laboratory, Oxford University, England.

Technique

The original strain of *E. typhosa*, type C, of Craigie, preserved in the cold on egg medium, was transplanted to a nutrient broth of pH 7.8 and incubated 2 hours. After centrifuging for 30 minutes, the supernatant liquid was inoculated on nutrient agar and incubated 18-20 hours. Colonies of

*Presented at the Eleventh Annual Christmas Meeting of the Laboratory Section, held in the Royal York Hotel, Toronto, on December 17 and 18, 1942.

the V form were then submitted to slide agglutination tests with V and O sera. Upon isolation of a pure V form of the organism, it was transferred to nutrient broth and incubated 2-3 hours. Finally, Petri dishes of nutrient agar were heavily inoculated with this culture and incubated at 37°C. (One Petri dish furnished about 10 cc. of finished suspension.)

The following morning, the culture in each dish was washed with 10 cc. of 75 per cent alcohol and scraped off with a platinum needle. The suspension thus obtained was placed in a flask, shaken thoroughly to break up clumps and left in the refrigerator for 3 or 4 days.

To prepare suspensions for the agglutination tests, this suspension in alcohol was centrifuged at high speed (about 2500 r.p.m.) for 30-40 minutes and, after the alcohol was decanted and the bacteria washed with distilled water, the latter were again suspended in various liquids (opacity 10 times $BaSO_4$ standard No. 1).

Early in February of 1942 a large quantity of the alcoholic suspension was made in the manner described. Slide agglutination tests of a suspension in physiological saline solution prepared from it showed agglutination, visible to the naked eye, to a dilution of 1:320 with V serum; with O and H sera no agglutination was apparent even in a dilution of 1:20. Under the microscope the suspension appeared to be very homogeneous with no clumps. All efforts to culture the suspension were unsuccessful.

A large portion of the suspension in alcohol was centrifuged and the sediment resuspended in six liquids of different composition to determine which might best preserve the bacteria in the V form: buffered sodium chloride (0.1 per cent) solution containing 50 per cent glycerol; the same solution but with 45 per cent glycerol and 25 per cent alcohol; buffered saline with 25 per cent alcohol; buffered saline alone; physiological saline; and distilled water were employed to prepare these suspensions (Table I). The remainder of the stock suspension in alcohol was left as it was in the refrigerator.

TABLE I

COMPOSITION OF VEHICLES FOR SUSPENSIONS OF E. TYPHOSA V

	Date of preparation 1942	Glycerol	Sodium Chloride	Buffer	Alcohol	
1	February	50%	0.1%	0.1%	—	
1a	March	25%	0.1%	0.1%	—	
1b	March	25%	0.1%	—	—	
2	February	45%	0.1%	0.1%	25%	
2a	March	25%	0.1%	0.1%	25%	
2b	March	25%	0.1%	—	25%	
2c	February	—	0.1%	0.1%	25%	
3	February	—	—	—	—	(distilled water)
3a	February	—	0.1%	0.1%	—	(buffered saline)
3b	March	—	0.2%	—	—	
3c	March	—	0.3%	—	—	
3e	March	—	0.4%	—	—	
3f	March	—	0.5%	—	—	
3g	March	—	0.6%	—	—	
3h	March	—	0.7%	—	—	
3i	February	—	0.85%	—	—	(physiological saline)
4	August	—	0.1%	0.1%	—	
5	August	50%	0.1%	0.1%	—	
6	October	formolized suspension in physiological saline.				

Suspension 1 (Table I) was prepared in large quantity to be used at once in routine slide agglutination tests of sera received for serological examination for evidence of intestinal infection.

All the above suspensions were tested with V and O sera and also with serum from a carrier of *E. typhosa* in 20-, 40-, 80-, 160- and 320-fold dilutions.

The first tests with the experimental as well as with the routine sera were made in the usual way, employing ordinary microscopic slides and manual shaking for several minutes. As this procedure proved inconvenient because of the time required for the numerous manipulations involved, a more rapid technique was employed.

Special "agglutination slides* for slide serum and precipitation tests" with shallow concavities were used. Each slide has 12 concavities, providing for as many tests on the one slide. A drop (23 drops to the cc.) of the suspension to be tested is placed in each of as many cavities as there are serum dilutions and a drop of the proper serum dilution is added. The slides, mounted on a special support holding 12 of them, are then shaken on a Kline Shaking Machine for 4 minutes or more, permitted to stand at rest for 15 minutes and examined under the microscope, using a magnification of 150.

Under these conditions an unagglutinated suspension (the control, for example) has a uniform veil-like appearance; the more complete the agglutination, the more apparent are the clumps and the clear spaces in the liquid surrounding them. When the clumps are very small, a magnification of 250 may be required to demonstrate them.

The results are recorded as follows:

4+ large clumps, 100 per cent of the bacteria agglutinated.
3+ fairly large clumps, 75 per cent of the bacteria agglutinated.
2+ medium " 50 " " " " " "
1+ small " 25 " " " " " "
− No clumps, no agglutination.

With this technique a large number of tests may be made in a comparatively short time.

RESULTS

The freshly prepared suspensions all gave similar results (see Table II, Initial Test) as follows:

	1/20	1/40	1/80	1/160	1/320
V Serum	4+	4+	4+	4+	3+
Serum from carrier	4+	4+	4+	3+	2+
O Serum	−	−	−	−	−

During the first few weeks following the preparation of these suspensions, the above series of tests was repeated two or three times each week, particularly for the purpose of controlling Suspension 1 which was used for routine work. No change in the preparations was noticed during this time. After about a month, however, it was found that Suspension 3i (in physiological saline) had lost much of its agglutinability by V serum;

**Agglutination Slide, A-474 X, Clay-Adams Co., Inc., New York, N.Y.*

and that Suspension 3a (in buffered saline), besides being less agglutinable by V serum, was readily agglutinated by O serum. These results are shown in detail below:

	1/20	1/40	1/80	1/160	1/320
Suspension 3i					
V serum	4+	3+	2+	–	–
O serum	2+	–	–	–	–
Suspension 3a					
V serum	4+	4+	2+	1+	–
O serum	4+	4+	3+	2+	–

Consequently, in March another series of suspensions was prepared from the same stock suspension in alcohol that had been used for preparation of the first series and that, since then, had been kept in the refrigerator. Various concentrations of glycerol, sodium chloride and alcohol were employed in making up these suspensions, as shown in Table I.

The initial test of these preparations with V and O sera gave results similar to those obtained upon initial test of the first series of suspensions, i.e. agglutination with V serum but not with O serum. At the end of three months, all the suspensions containing glycerol or alcohol as well as that in distilled water showed no change, whereas those in saline alone were agglutinated to a greater or less degree by both the V and O sera.

After four months, those of the first series that contained saline alone were agglutinated more completely by O serum than by V serum; Suspension 1 containing 50 per cent glycerol, however, seemed to be losing its agglutination by V serum without becoming agglutinable by O serum. Suspension 2, containing glycerol and alcohol, showed no change.

About this time a note was received from the Standards Laboratory to the effect that it was no longer shipping *E. typhosa* V suspensions overseas because of their instability. A V suspension which had been received from that Laboratory some months previously, with the instruction that it was not to be used more than three months after November 4, 1941, was then (six months after that date) tested and found to be, like Suspension 3a, readily agglutinated by O serum.

In the month of August, two new suspensions of the composition of Suspensions 1 and 3a were prepared from the original stock suspension in alcohol. These are indicated as Suspensions 4 and 5 in Table II. After two months, Suspension 4 (in buffered saline) had apparently been changed entirely to the O form, whereas Suspension 5, similar to Suspension 4, but containing also 50 per cent glycerol, was still agglutinated only by V serum. Suspension 4 was readily agglutinated by patients' sera giving positive agglutination with the usual *E. typhosa* O (O 901) suspension employed in routine work.

In the month of October all the previously prepared suspensions were again tested. The suspensions in glycerol, alcohol and in distilled water showed no appreciable further change except that Suspension 1 had almost entirely lost its agglutinability. All the suspensions in saline alone showed a marked increase in their agglutinability by O serum.

TABLE II

AGGLUTINATION OF E. TYPHOSA V SUSPENSIONS
(Dilution of V serum 1:50; dilution of O serum 1:25)*

	Date of Preparation 1942	Initial Test		After 1 mo.		After 2 mos.		After 3 mos.		After 4 mos.		After 8 mos.		After 9 mos.		After 10 mos.	
		V	O	V	O	V	O	V	O	V	O	V	O	V	O	V	O
1	February	4+	–	4+	–	4+	–	4+	–	3+	–	2+	–	T	–	T	–
1a	March	4+	–	4+	–			4+	–			4+	–	4+	–		
1b	March	4+	–	4+	–			4+	–			4+	–	4+	–		
2	February	4+	–	4+	–					4+	–	4+	–	4+	–	4+	–
2a	March	4+	–	4+	–			4+	–			4+	–	3+	T		
2b	March	4+	–	4+	–			4+	–			4+	–	4+	–		
2c	February	4+	–	4+	–					4+	–	4+	–	4+	2+	3+	3+
3	February	4+	–	4+	–					4+	–	4+	–	4+	–	4+	2+
3a	February	4+	–	3+	3+					2+	3+	–	4+	–	4+	–	4+
3b	March	4+	–	4+	–			4+	1+			3+	2+	2+	3+		
3c	March	4+	–	4+	–			3+	3+			–	4+	–	4+		
3e	March	4+	–	4+	–			3+	2+			1+	4+	1+	4+		
3f	March	4+	–	4+	–			2+	3+			–	4+	–	4+		
3g	March	4+	–	4+	–			2+	3+			–	4+	–	4+		
3h	March	4+	–	4+	–			1+	3+			–	4+	–	4+		
3i	February	4+	–	3+	1+					2+	4+	–	4+	–	4+	–	4+
4	August	4+	–			–	4+	–	4+	–	4+						
5	August	4+	–			4+	–	4+	–	4+	–						
6	October	4+	–	4+	T	4+	T										
Alcohol 10%	March	4+	–	4+	–			4+	–			4+	–	4+	–		
Alcohol 25%	March	4+	–	4+	–			4+	–			4+	–	4+	–		
Alcohol 35%	March	4+	–	4+	–			4+	–			4+	–	4+	–		
Alcohol 50%	March	4+	–	4+	–			4+	–			4+	–	4+	–		
Alcohol 65%	March	4+	–	4+	–			4+	–			4+	–	4+	–		
Alcohol 75%	March	4+	–	4+	–			4+	–			4+	–	4+	–		

*NOTE: The titre of the V serum employed was 1:5000. (Macroscopic test in Dreyer tubes.)
The (adjusted) titre of the O serum (Standards Laboratory) was 1:250.

A month later, Suspension 1 was only very slightly agglutinated by V serum and still unaffected by O serum. Suspension 2c containing 25 per cent alcohol in buffered saline was beginning to be agglutinated by O serum, as was Suspension 6, which had been prepared only a month before and which contained physiological saline with 2 per cent of formalin.

Little further change was noticed when the suspensions were tested for the last time before the preparation of this report, except that Suspension 2a, after nine months, was showing traces of agglutination with O serum and its reaction with V serum was slightly diminished; and Suspension 3, in distilled water, after ten months, was markedly agglutinated by O serum, a change from the previous month's result, but had not lost any of its agglutinability by V serum. A final test of all suspensions with H serum gave no trace of agglutination.

These results are summarized in Table II. In order to avoid too much detail, only the agglutination test results with the 1:50 dilution of V serum and the 1:25 dilution of O serum are recorded. It will be observed in this table that the suspension of *E. typhosa* V deteriorates rapidly in saline, whether buffered or not, and regardless of the concentration of sodium chloride; that deterioration is much slower in glycerol; and that it suffers very little alteration in distilled water and in ethyl alcohol solutions.

To summarize, suspensions that are specific and highly agglutinable can be prepared by suspending the culture in 75 per cent alcohol for a few days; and when the bacteria are resuspended in buffered saline with glycerol the suspension can be kept for some months.

The results indicate further that suspension of *E. typhosa* V in 75 per cent alcohol for a few days not only provides a temporary, preliminary suspension for preparation of routine working suspensions, but that it also provides a stock suspension that keeps well for many months without noticeable loss of its specificity or agglutinability. Sodium chloride alone, however, has a deleterious effect upon suspensions of *E. typhosa* V.

Consequently, when an *E. typhosa* V suspension is to be prepared, it is recommended that the culture be suspended in 75 per cent alcohol and that this preparation be employed as a stock suspension. For routine use, a small quantity of it may be centrifuged and the bacteria resuspended in a solution containing 50 per cent glycerol and 0.1 per cent sodium chloride, and buffered with 0.1 per cent of the two sodium phosphates.

RESULTS WITH ROUTINE BLOOD SPECIMENS

Employing the suspension prepared in the manner described, routine blood specimens from cases of suspected enteric disease to the number of 174 were tested. Only 8 gave positive results in a dilution of 1 in 10; and from the faeces of 3 of the cases represented by these positive sera *E. typhosa* was isolated. From the faeces, blood or urine of 18 of the cases represented by the 166 negative sera, *E. typhosa* or some other organism of the Salmonella group was isolated. These results are similar to those reported by others.

Unfortunately only one blood specimen from a known typhoid carrier was submitted for test. The serum from this specimen agglutinated the V suspension in a dilution of 1 in 320.

SUMMARY

Highly agglutinable suspensions of *E. typhosa* V were prepared in 75 per cent alcohol. These suspensions kept well for months in alcohol; but when, after centrifugation, the bacteria were resuspended in distilled water and in glycerol-saline solution, they slowly lost their agglutinability by V serum; in saline solution they not only lost their agglutinability by V serum, but also rapidly became agglutinable by O serum.

A method is described for preparing, in 75 per cent alcohol, a stock suspension of *E. typhosa* V from which may be prepared, for routine work, suspensions in buffered glycerol saline.

ACKNOWLEDGMENTS

Sincere thanks are due Dr. James Craigie for his suggestions which led the author to undertake the study described, and to Mr. M. H. McCrady for his assistance in the preparation of this report.

REFERENCES

1. Peluffo, C. A., Proc. Soc. Exper. Biol. & Med., 1941, *48* (*1*): 340-343.
2. Craigie, J., and Yen, C. H., Canad. Pub. Health J., 1938, *29*: 448.

Intradermal Immunization with Diphtheria Toxoid

F. O. WISHART, M.A., M.D., D.P.H.
Department of Hygiene and Preventive Medicine
School of Hygiene, University of Toronto

INTRADERMAL administration of antigens, including diphtheria toxoid, has been under investigation for a number of years and has given promising, but not altogether consistent, results. Since the subcutaneous injection of alum-precipitated or unmodified toxoid in adequate doses has been shown repeatedly to render approximately 95 per cent of persons Schick negative, it is necessary to be able to assert with confidence that any other method is as good or better. Accordingly, experiments were undertaken to test the effectiveness of active immunization against diphtheria by the intradermal administration of toxoid and these will be described below.

Experimental

A group of 74 university students was Schick-tested (including contro)l and had blood drawn for antitoxin determinations on their sera by the method of Fraser (1). At the same time each student was given 0.1 cc. of alum-precipitated diphtheria toxoid (15 Lf. per cc.) intradermally. One week later 39 of the group were found to be positive reactors to the Schick test, and of this number, one had more than 1/500 and less than 1/100 unit of diphtheria antitoxin per cc. of serum while the remaining 38 had less than 1/1000 unit. These 38 students were given two subsequent doses of unmodified toxoid (24 Lf. per cc.) of 0.1 cc. each at intervals of three weeks and five weeks respectively. Two months later 35 of the 38 persons reported to have blood drawn for antitoxin determinations, the results of which are shown in Table I.

TABLE I

Antitoxin Titres 2 Months After the Intradermal Administration of Diphtheria Toxoid

Original Titre < 1/1000 unit

Titre	1/1000 unit & >	1/500 unit & >	1/250 unit & >	1/100 unit & >	1/30 unit & >	1/10 unit & >	1 unit & >	No. Tested
Number.....	32	29	28	18	12	9	5	35
Per cent.....	91.4	82.9	80	51.4	34.3	25.7	14.3	

If we assume 1/250 unit of antitoxin per cc. of serum to be the Schick-test level, it is apparent from Table I that 20 per cent failed to produce this amount of antitoxin, and a further 29 per cent failed to produce a satisfactory amount of antitoxin. The remaining 51 per cent produced 1/100 unit per cc. or better.

However, it should be noted that among the group of 35 students there were 8 who had had diphtheria or diphtheria toxoid some years previously. Such persons would, accordingly, be expected to respond more readily than persons without a diphtheria experience of any kind, and seven of the eight acquired 1/250 unit or greater of antitoxin. The results are therefore more favourable, possibly, than they might have been with a normal group.

It was intended to use alum-precipitated toxoid entirely in this experiment but as some undesirable local reactions, including one sterile abscess, followed the administration of this antigen, unmodified toxoid was given in the second and third doses. Also, the alum-precipitated toxoid produced a firm, discoloured nodule, which persisted for a considerable period. For these reasons it was concluded that it was not suitable for intradermal administration. On the other hand, unmodified toxoid produced no untoward results.

A second group of 15 university students who had not had diphtheria nor diphtheria toxoid and who had <1/1000 unit of diphtheria antitoxin per cc. of serum was selected for intradermal administration of 3 doses of fluid toxoid (76 Lf. per cc.) of 0.1 cc. each, at an interval of 3 weeks between doses. Two weeks after the final dose of toxoid, blood was drawn and antitoxin determinations made.

TABLE II

ANTITOXIN TITRES 2 WEEKS AFTER THE INTRADERMAL ADMINISTRATION OF DIPHTHERIA TOXOID

Original Titre < 1/1000 unit

Titre	1/1000 unit & >	1/500 unit & >	1/250 unit & >	1/100 unit & >	1/50 unit & >	1/10 unit & >	1 unit & >	No. Tested
Number.....	14	13	11	10	7	5	3	15
Per cent.....	93.3	86.7	73.3	66.7	46.7	33.3	20	

The results in this group show the same trend as in the first experiment, with 26.7 per cent failing to reach a level of antitoxin which would cause them to be Schick-negative while 66.7 per cent produced 1/100 unit or greater. On account of the small number in this group, anything like exact agreement with the first group could not be expected. Also, the blood sample was drawn in this case only two weeks after the final dose of toxoid instead of two months after, as in the first experiment. This difference in interval introduced a factor of undetermined influence, but was necessitated by academic circumstances.

DISCUSSION

The results as shown in Tables I and II are in fairly close agreement, and a detailed analysis of the differences is not warranted in view of the small numbers in the two groups. The Schick conversion rate (assuming 1/250 unit of antitoxin per cc. of serum to be the Schick-test level) was 80 per cent in the first group and 73.3 per cent in the second. Such results are, of course, far from satisfactory, and this in spite of the fact that toxoid of a very high

Lf. value (76 Lf. per cc.) was used in the second group. Further, only 51.4 and 66.7 per cent respectively in the two groups reached a titre of 1/100 unit or greater. That the great majority of those immunized should reach a high antitoxin titre, e.g. 1/50 unit, is important, as it is well recognized that the antitoxin level decreases over a period of time (2) (3).

Recently, Blatt et al (4) reviewed the subject of diphtheria immunization by the intradermal route and presented experimental data on its use. The conclusion reached by Blatt and his associates was that "the preferred method of diphtheria immunization is the intradermal injection of 0.1 and 0.2 cc. respectively, of unmodified toxoid (Ramon's anatoxin) at an interval of 3 weeks, followed by a third injection if the Schick test is still positive." There is general agreement that the eradication or control of diphtheria in a community depends upon the successful immunization of the pre-school and school population and the maintenance of that immunity. This implies the administration of toxoid on a large scale, and it is our opinion that in such efforts the Schick test, for reasons of economy and efficiency, has no place. Furthermore, if a method of immunization is used which is known to be highly effective, the Schick test is an unnecessary burden to an immunization poogram.

The conclusion reached by Blatt and his fellow workers, and quoted above, was based largely on the result obtained with a group of 77 children from 3 to 19 years of age, who were given 0.1 and 0.2 cc. of fluid toxoid (Lf. value not stated) 3 weeks apart. Nine months later 76 or 98.7 per cent were Schick-negative. In another group of 20 children, however, ranging in age from 2 to 11 years, who were given 0.2 and 0.2 cc. of alum-precipitated toxoid 3 weeks apart, 17 or 85 per cent only were Schick-negative nine months later. When re-tested at 16 months, 19 or 95 per cent were Schick-negative. Such re-testing, however, is not valid, for the Schick test itself serves as an effective secondary stimulus. The result with this smaller group more nearly corresponds to that obtained by ourselves, and is definitely inferior to that for the larger group. One might have expected that the result would be at least as good since the dosage was larger and alum-precipitated toxoid was used instead of plain toxoid. The result with this group should perhaps have received more attention.

The excellent Schick conversion rate obtained by Blatt in the one group is at great variance with our findings. It is unlikely that the explanation lies in the antigen, since the toxoid used by us covered a wide range of Lf. value. The age groups concerned were different, but it is doubtful if this is an important factor. The dosage of antigen also was different, in our case, 3 doses of 0.1 cc. each, 3 weeks apart, in contrast to 0.1 cc. and 0.2 cc., 3 weeks apart. The significance of this difference cannot be accurately assessed, but one might expect that the extra dose, involving as it does a longer elapsed time for the course of immunization, would at least be not less efficient. A further and possibly important difference exists in the method of selection of individuals for immunization. In our case, both the Schick and antitoxin status were known, as well as any previous history of diphtheria or toxoid, while in the

group reported by Blatt, only the Schick test was used. It is not known, therefore, how many possessed some antitoxin prior to their course of toxoid or had had some previous diphtheria experience, either natural or artificial, and were in a condition to respond readily to further administration of antigen. Finally, before endorsing the intradermal route one would wish to have information on the amount of antitoxin produced, and this is not obtainable where the Schick test is used as the index of response.

Our results confirm those of Blatt as to the unsuitability of alum-precipitated toxoid for intradermal administration. No reactions, other than some local redness, were noted following the use of plain toxoid. The occurrence of undesirable reactions may be less common following intradermal than subcutaneous administration of toxoid, but this in itself does not constitute a sound reason for adopting the former route for immunization. In the young age groups in which extensive toxoiding is carried out, reactions to the subcutaneous route are very uncommon, and in the older age groups a preliminary Moloney or reaction test largely averts this difficulty. From a practical standpoint one can foresee an added drawback to intradermal injection in that greater precision is required than for subcutaneous injection. In inoculating infants and young children dispatch is an element of some importance.

CONCLUSIONS

1. The intradermal administration of diphtheria toxoid according to the technique described does not constitute an efficient method of primary immunization.
2. Alum-precipitated toxoid is not suitable for intradermal administration.

REFERENCES

1. Fraser, D. T.: Trans. Roy. Soc. Canada, 1931, 25, Ser. V: 175.
2. Fraser, D. T.: Canad. Pub. Health J., 1939, *30:* 469.
3. Volk, Vladimir K., and Bunney, William Edward: Am. J. Pub. Health, 1942, *32:* 700.
4. Blatt, Maurice L., Fisher, Seymour and van Gelder, David W.: Am. J. Dis. Child., 1941, *62:* 757.

The Canadian Public Health Association*
1942-1943

●

REPORT OF THE HONORARY SECRETARY

IN reviewing the activities of the Canadian Public Health Association for the fifteen months that have elapsed since the last annual meeting, one is impressed equally with the things we do and the things we are compelled to leave undone. But some if not many of the things left undone last year are listed among this year's accomplishments, and some if not all of the things not done this year may be recorded among next year's achievements. I shall attempt a brief reference to only a few of the matters of interest to the members of the Executive Council and the Association generally.

Worthy of special comment is the fact that we were able to balance our budget this year, in contrast to our financial inadequacies in the years 1940 and 1941. It is encouraging to note that the revenue from advertising and subscriptions increased appreciably over the previous year. In January 1943 changes were made both in the title of the JOURNAL and in the cover design. The change in title was prompted primarily to permit of greater emphasis being placed on that part of the name which is indicative of the JOURNAL's field, and the change in cover design was based on the dictates of purchaser appeal.

It is fitting here that we express our appreciation of the generous contribution again made to us by the Canadian Life Insurance Officers Association. We are more than grateful for this aid, particularly in wartime.

In keeping with the prescribed practice of meeting in turn in eastern, central and western Canada, the Association held its thirty-first annual meeting in Toronto on June 1st, 2nd and 3rd, in conjunction with the Ontario Health Officers Association. Seven hundred members were registered and more than sixty papers were presented at the fifteen sessions. The meeting was the occasion of the adoption of what we have presumed to call "A Public Health Charter for Canada". In this charter were set down what might be termed the minimum objectives in a national health program. The eleventh mid-winter meeting of the Laboratory Section was held as usual during the third week of December, with an attendance of some ninety members.

For a number of years there has been an increasing demand for an approved course of training for sanitary officers. This year the Association found it possible to meet the need, and in November it sponsored the first course in this field in Canada. It was offered in three terms, each of twelve weeks, devoted to communicable diseases and vital statistics, sanitation, and food control. An average of twenty-five candidates enrolled for each term. Thirty candidates successfully completed the examinations in September, 1942, bringing to 267 the number

**Reports presented at the wartime conference and thirty-second annual meeting of the Canadian Public Health Association, held in the Royal York Hotel, Toronto, on October 4 and 5, 1943. Copies of the complete annual report for 1942-43 are available without charge from the Association's office, 150 College Street, Toronto 5.*

who have been granted the "Certificate in Sanitary Inspection (Canada)" since the principle of certification was established in 1935.

At the request of Dr. J. J. Heagerty, Chairman of the Dominion Government's Advisory Committee on Health Insurance, the Association's Committee on Health Insurance presented a brief before the Special Committee on Social Security of the House of Commons in May, 1943. This presentation, I believe, expressed the opinion of the Association's members on the place of preventive medicine and public health in any state-sponsored scheme of prepaid medical care, and was well received by the Special Committee.

Minimum requirements for employment in public health nursing in Canada were drafted by the Public Health Nursing Section in co-operation with the Public Health Section of the Canadian Nurses Association.

It is to be noted that the name of the Canadian Health Conservation Contest has been changed to the National Health Honour Roll, in keeping with a similar change in the title of the American contest. Again we are indebted to the American Public Health Association, the W. K. Kellogg Foundation, and the Metropolitan Life Insurance Company for making these contests possible.

It is with a profound sense of loss that the members of the Association recall the death of Dr. Albert Grant Fleming in Montreal on April 9th. Although Dr. Fleming had assumed the presidency of the Association only in January, the Association's committees and the Executive Council had benefited from his counsel since 1928. Another distinguished colleague, Dr. William Warwick, formerly Chief Medical Officer for the Province of New Brunswick, died in May. Dr. Warwick served as President of the Association in 1933 and had been a member of the Executive Council for many years. We are pleased that Dr. Adelard Groulx has found it possible to serve as president for the remaining months of this year.

On behalf of the officers and members of the Association, it gives me a good deal of personal pleasure again to conclude my report by thanking Mr. Robert Randall for his untiring efforts in the interests of the Association.

J. T. PHAIR, *Honorary Secretary*

REPORT OF THE HONORARY TREASURER

THE financial statement for 1942 indicates that, in spite of increasing costs, the income of the Association almost offset all expenditures. For several years deficits of a thousand dollars or more had reflected a serious financial position. The income of the Association for 1942, however, amounted to $11,380.75 and the expenditures to $11,389.19. The small deficit of $8.44 is in striking contrast with the deficit of $1,374.34 in 1941. This improvement is due to an increase in the revenue from advertising and subscriptions, and a marked reduction in the cost for the annual meeting. There were, however, increased expenditures in connection with the printing and mailing of the JOURNAL; and it is when these increased costs are considered that the achievement of a balanced budget is appreciated.

The continued financial support of the Canadian Life Insurance Officers Association has made possible the enlarged program of the Association and enabled it to assume responsibilities of leadership in the planning of full-time health services for all parts of Canada, as well as to serve as the national association of those engaged in the specialized fields of public health.

It is to be hoped that the Federal Government will, at the conclusion of the war, consider the Canadian Public Health Association when it resumes its policy of grants-in-aid to the national voluntary health-promoting agencies. It has been the stated policy of the Government not to extend such grants during the war years.

In considering the financial operations of the Association, it is essential to remember that the budget is but a fraction of that which would be required if the Association had salaried officers and maintained business and editorial offices for which rent had to be paid. Since the inception of the Association in 1910, the general secretary and the editor of the JOURNAL have served without salary, and no rent has been paid for office accommodation, telephone service, etc. The Association has long been indebted to Dr. Gordon Bates and his organization, the Health League of Canada, for providing space at their headquarters. For the past fourteen years the editorial offices of the JOURNAL have been accommodated without charge in the School of Hygiene, University of Toronto.

In order to maintain a favourable financial position, and to meet the increasing publishing costs of the JOURNAL, the Association must have additional revenue from both membership fees and advertising space. Through the efforts of Mr. Harry F. Coles, the revenue from advertising has been significantly increased since his appointment as representative in February 1942, but it is unlikely that, for the present, any further large increase will be possible. I trust therefore that the Executive Council will give consideration at this meeting to increasing the subscription price of the JOURNAL. The annual fee is much less than that charged for any other comparable scientific publication and represents little more than the cost of printing and mailing. It is realized that such an increase may be a more serious problem to the Provincial Departments of health, who have generously supported the JOURNAL for many years, than it will be to the individual subscriber. I should like to recommend also that action be taken at this annual meeting to establish sustaining memberships to allow our industrial leaders to further their interest in public health through the Association. At a time like this, when attention is focused upon measures for social security, including health insurance, they may welcome this opportunity.

In conclusion I wish to express my appreciation of the services of Mr. William Nichols, who for the past five and a half years has been responsible for the conduct of the work of the treasurer's office, in addition to his other duties with the Association. Mr. Nichols left in March 1943 to enter the Royal Canadian Air Force.

The audited statements for 1942 are appended.

D. V. CURREY, *Honorary Treasurer*

BALANCE SHEET
AS AT 31st DECEMBER, 1942

ASSETS

Cash on Hand		$ 441.05	
Cash in Bank		1,087.72	
Accounts Receivable—Advertising	$496.50		
Subscriptions	254.42		
Reprints	123.93		
Total	$874.85		
Less: Reserve for Doubtful Accounts	35.00		
		839.85	
Deposit with Postmaster		15.00	
			$2,383.62
Investments—Province of Ontario, 4½% Bonds due in 1949—Cost			1,012.50
Canadian Public Health Journal		$1,000.00	
Office Equipment	$223.65		
Less: Reserve for Depreciation	168.42		
		55.23	
			1,055.23
Prepaid Expenses			240.10
			$4,691.45

LIABILITIES

Accounts Payable		$ 604.50	
Prepaid Subscriptions		405.25	
Accrued Commissions and Expenses		50.78	
			$1,060.53
Surplus:			
Balance as at 31st December 1941		$3,639.36	
Deduct:			
Loss for the Year (See Schedule A)		8.44	
			3,630.92
			$4,691.45

Referred to in our report of this date attached.

HILL, TESKEY & Co.,
Chartered Accountants.

TORONTO: 9th March 1943.

Schedule A

CANADIAN PUBLIC HEALTH ASSOCIATION
REVENUE ACCOUNT
FOR THE YEAR ENDED 31ST DECEMBER, 1942

Revenue			
Advertising		$4,136.50	
Less: Commissions Paid		769.35	
			$3,367.15
Subscriptions (*Less* refunds)			3,647.24

Milk Number:			
Sales	$ 69.51		
Less Cost	21.44		
		48.07	
Nutrition Number:			
Sales	$ 8.80		
Less Cost	7.84		
		.96	
Sanitary Inspectors' Section:			
Sales of Manual	$ 406.55		
Less Cost	146.83		
		259.72	
Examinations—Revenue	$ 472.00		
Cost (excluding salaries)	186.81		
		285.19	
Reprints:			
Sales	$ 875.74		
Less Cost	823.70		
		52.04	
Canadian Life Insurance Officers Association—Grant		3,500.00	
Convention and Meeting:			
Receipts	$1,650.49		
Expenses	1,520.62		
		129.87	
Bond Interest		45.00	
U.S. Premium, etc.		45.51	
			$11,380.75
Expenses			
Printing		$5,924.45	
Postage on Magazines and Mailing Cost		712.04	
Advertising and Promotion Expense		161.53	
Honoraria		433.62	
Salaries		3,192.50	
Stationery and Office Supplies		174.07	
Postage, Telephone and Express		267.90	
Laboratory Section:			
Expenditure	$209.27		
Laboratory Section Meeting—Receipts	164.88		
		44.39	
Canadian Health Conservation Contests		84.89	
Development of Public Health in Canada—Cost	$ 71.44		
Less Sales	49.84		
		21.60	
Committee on Full-Time Local Health Services		6.21	
Vital Statistics Section		21.01	
Public Health Education		24.09	
Unemployment Insurance		64.20	
Miscellaneous Expenses		99.97	
Provision for Depreciation:			
Office Equipment		44.73	
Bad Debts Written Off		6.00	
Discounts allowed and Bank Charges		105.99	
			11,389.19
Loss for the Year transferred to Surplus Account			$ 8.44

REPORT OF THE EDITORIAL BOARD

SINCE the Association first assumed the responsibility for the editing and publishing of the JOURNAL fifteen years ago, its chief concern has been to inform physicians, public health nurses, and other public health workers of significant advances in public health and preventive medicine. The publication of the JOURNAL during these war years is becoming increasingly difficult. Contributions from medical officers of health are much less frequent, as those who formerly contributed valuable articles now have little or no time for their preparation—even formal reports of health departments have been reduced to "dry bones". The provincial and federal governments no longer have the opportunity to conduct studies, because of the depletion of their staffs. Your editorial board is similarly handicapped. This is not said as an apology for the JOURNAL, but as an explanation of the omission of sections and contributions that formerly appeared.

The change of title to CANADIAN JOURNAL OF PUBLIC HEALTH in January 1943 may, we hope, be taken as an indication that old age has not set its hand too heavily upon the publication. Although many readers may hardly have noticed this change, they have been aware of improvements in the format and cover design. As the responsibility for the preparation of the JOURNAL rests with Mr. Robert Randall, I can record numerous expressions of appreciation, not only for its articles, but also for its arrangement.

For the twelve months ending December 1942 the average monthly circulation was 3,395 copies, as compared with 3,371 copies in 1941. The present circulation includes 1,800 physicians, 400 public health nurses, 450 other public health workers, 200 scientific libraries in Canada and the U.S.A., 75 hospitals, and 275 institutions, companies and associations, etc. The revenue from subscription fees during 1942 amounted to $3,647.24, as compared with $3,432.81 in 1941.

For the twelve issues of 1942 the gross revenue from advertising in the JOURNAL amounted to $4,136.50, in comparison with the figure for 1941—$3,637.50. The cost of printing the JOURNAL increased from $5,671.55 in 1941 to $5,924.45 in 1942. Distribution costs were slightly lower: $712.04 in 1942 as against $721.58 in the previous year. The increase in printing charges was due largely to costs of labour and material required for the June 1942 issue, a special number presenting a symposium on the outbreak of poliomyelitis and encephalitis that occurred in the Province of Manitoba in 1941. This issue was subsequently reprinted for sale by the Association, and the Department of Health and Public Welfare of Manitoba distributed another edition of 2,000 copies.

Sales of other reprints amounted to $875.74 during the year, but as the reprints are sold practically at cost, the revenue from this source was only $52.04.

During 1942 the Association continued the distribution of several previous publications: *Safe Milk, Canadian Studies on Nutrition, The Development of Public Health in Canada,* and the *Manual for Sanitary Inspectors. A Public Health Charter for Canada,* outlining the minimum requirements for a national health program, was distributed without charge.

During the year the Board continued to make the JOURNAL available to undergraduate students in medicine and public health nursing, at a rate of one dollar for two years. Although this represents a good deal less than the actual printing and mailing costs, the members believe that as the JOURNAL can serve as a useful supplement to courses of instruction in public health and preventive medicine, this reduction is justifiable.

The members of the Editorial Board are grateful to the Provincial Departments of Health for their co-operation in continuing to include their medical officers of health, public health, nurses and other personnel in the subscription list. There is abundant evidence that health officers are turning more and more to the JOURNAL for information.

R. D. DEFRIES, *Editor*

RESOLUTIONS ADOPTED AT THE WARTIME CONFERENCE AND THIRTY-SECOND ANNUAL MEETING OF THE CANADIAN PUBLIC HEALTH ASSOCIATION, HELD IN TORONTO ON OCTOBER 4 AND 5, 1943

1. BE IT RESOLVED THAT THIS Association reaffirms its previously expressed opinion that any country-wide scheme of prepaid medical care must make due provision for adequate preventive services, otherwise it cannot be considered as satisfactorily meeting the health needs of this country.

2. WHEREAS due to the demands by the Active Forces for medical personnel, many of the recently graduated medical men and women are inadequately prepared for civilian practice,

Therefore, BE IT RESOLVED that the Canadian Public Health Association urge that due consideration be given by the appropriate Federal authority to the provision of a program of well-directed postgraduate study for medical personnel before they are demobilized, and that a copy of this resolution be forwarded to the president of every university which has a Faculty of Medicine.

3. BE IT RESOLVED that this Association unanimously supports the principle of grants-in-aid from the Central Government on behalf of all well-considered provincial and municipal health projects and urges that due provision be made for the immediate implementing of such grants as a basis for the urgent expansion of existing health services.

4. WHEREAS the Editorial Board of the Canadian Journal of Public Health has, on a voluntary basis, developed and maintained a widely recognized scientific public health journal, and

WHEREAS the difficulties arising out of the war have not been permitted to interfere with the content and publication of the Journal,

BE IT RESOLVED that this meeting extend to the Editorial Board the sincere thanks and appreciation of all the members of the Association for their untiring services.

RESOLUTIONS FROM THE PUBLIC HEALTH NURSING SECTION

1. WHEREAS there is a general need in Canada for a greater number of trained public health nurses,

BE IT RESOLVED that the Canadian Public Health Association urge that its members, including all medical officers of health, stimulate greater interest in nursing among young women with qualifications as outlined by the Study Committee of the Public Health Nursing Section,* and that more effort be made to secure special preparation in public health nursing for selected nurses graduating from hospital and university schools.

2. BE IT RESOLVED that the Canadian Public Health Association be asked to urge those provinces which do not now provide a health service in their teacher-training institutions to take steps to implement such a service.

RESOLUTIONS FROM THE VITAL STATISTICS SECTION

The resolutions adopted by the Vital Statistics Section at its conference in Ottawa on October 6th will be found on page 527 of this issue.

CANADIAN PUBLIC HEALTH ASSOCIATION OFFICERS FOR 1944 (REPORT OF THE COMMITTEE ON NOMINATIONS)

Honorary President: The Honourable Reginald P. Vivian, M.D., Minister of Health and Hospitals, Province of Ontario.

President: Dr. B. T. McGhie, Deputy Minister of Health and Hospitals, Province of Ontario.

Vice-Presidents: Dr. C. W. MacMillan, Chief Medical Officer, Province of New Brunswick, Fredericton; Dr. Mary A. Ross, Associate Professor of Biometrics, School of Hygiene, University of Toronto; Dr. Arthur Wilson, Medical Officer of Health, Saskatoon.

Honorary Secretary: Dr. J. T. Phair, Chief Medical Officer of Health for the Province of Ontario, Toronto.

Honorary Treasurer: Dr. D. V. Currey, Medical Officer of Health, St. Catharines, Ontario.

Editor, Canadian Journal of Public Health: Dr. R. D. Defries, Director, School of Hygiene and Connaught Laboratories, University of Toronto.

Executive Committee: Dr. Gordon Bates, Toronto; Dr. D. V. Currey, St. Catharines; Dr. R. O. Davison, Regina; Dr. R. D. Defries, Toronto; Dr. A. R. Foley, Quebec; Dr. D. T. Fraser, Toronto; Dr. Ad. Groulx, Montreal; Dr. J. J. McCann, Renfrew; Dr. B. T. McGhie, Toronto; Dr. G. D. Porter, Toronto; and Dr. R. E. Wodehouse, Ottawa.

**Minimum Requirements for Employment in Public Health Nursing, Canad. J. Pub. Health, 1943, 34: 424.*

EDITORIAL SECTION

EDITORIAL BOARD

R. D. Defries, M.D., D.P.H., Editor
N. E. McKinnon, M.B., and J. T. Phair, M.B., D.P.H., Associate Editors
R. L. Randall, Assistant Editor

A. Marguerite Archibald, M.D., D.P.H. Gordon Bates, M.D. A. E. Berry, M.A.Sc., C.E., Ph.D. J. Craigie, M.B., Ch.B., Ph.D., D.P.H. J. G. Cunningham, B.A., M.B., D.P.H. C. E. Dolman, M.B., B.S., Ph.D., D.P.H., M.R.C.P. D. T. Fraser, M.C., B.A., M.B., D.P.H., F.R.S.C. Ronald Hare, M.D. Edna L. Moore, Reg.N. E. W. McHenry, M.A., Ph.D. G. D. Porter, M.B. A. H. Sellers, B.A., M.D., D.P.H. F. O. Wishart, M.A., M.D., D.P.H. J. Wyllie, M.A., M.D., Ch.B., B.Sc., D.P.H.

MAJOR FREDERICK ADAMS, M.B., D.P.H.

MEMBERS of the Canadian Public Health Association throughout Canada were shocked to learn of the untimely death of Major Frederick Adams, which occurred suddenly at London, Ontario, on October 31st. He had been Medical Officer of Health of Windsor, Ontario, for twenty years and had served his country as hygiene officer in two wars.

Major Adams was born at Malton, Ontario, on October 19, 1884. After graduating from the University of Toronto in 1910, with the degree of M.B., he specialized in laboratory work, first with the Provincial Board of Health of Ontario and later as epidemiologist with the Toronto Board of Health, where he was associated with the late Dr. Grant Fleming. Following post-graduate study, he received the Diploma in Public Health from the University of Toronto in 1914. From February 1917 to March 1919 he served overseas with the Canadian Army Medical Corps, with the rank of Major. On his return, he was appointed Medical Officer of Health for the Essex Border Municipalities, adjacent to and including Windsor, Ontario. With the amalgamation of the Border Cities under the name of Windsor in July 1935, he became Medical Officer of Health for the city and the neighbouring municipality of Riverside. The Windsor project was the first demonstration in Canada of the value of combining resources in order to provide full-time health services for municipalities adjacent to large cities. Major Adams gained alike the confidence of municipal authorities and citizens, and enjoyed the whole-hearted co-operation of his medical colleagues. Through his achievements, Windsor and the Border Cities attracted the attention of public health leaders throughout the continent. For the past quarter of a century, the Border district has had an enviable record in public health, as indicated by the low incidence of communicable diseases and maternal and infant mortality, and a strikingly low general death rate. This excellent showing has been due to Major Adams's leadership in health matters. He was not only a most able public health administrator, but also an outstanding epidemiologist; and his report of the outbreak of haemorrhagic smallpox in Windsor in 1923 and 1924 constitutes a most important contribution to Canadian epidemiology and will remain a classic in studies of communicable diseases.

After the first world war, Major Adams maintained his interest in the Canadian Army Medical Corps as a reserve officer. With him, duty to country always came first, and although age regulations barred him from serving overseas in the present war, he obtained leave of absence in October 1940 in order to serve in Canada as District Hygiene Officer for Military District No. 1, with headquarters at London. Major Adams's three sons also enlisted for active service, all joining the Royal Canadian Air Force. One was killed in air operations overseas in July 1941 and another was recently reported missing. A third is serving with the R.C.A.F. in Canada.

The Canadian Public Health Association, representing many of Major Adams's most intimate friends, pays tribute to the memory of one of Canada's most expert, able and conscientious public health leaders. He was held in the highest esteem not only professionally but personally, and few men have had so many friends in all walks of life. Endowed with fine qualities of spirit, he always gave of his best.

To Mrs. Adams we extend our heartfelt sympathy.

THE WARTIME CONFERENCE OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

THE wartime conference and seventy-second annual business meeting of the American Public Health Association, held in New York October 12th to 14th, was an outstanding success. Although planned as a wartime conference with the objective of limiting the attendance and thus assisting in the effort to reduce travel, the meeting was among the best attended in the history of the Association. It was embarrassing to the local committee to have such an unexpectedly large attendance, but in spite of this the facilities proved adequate to accommodate the large numbers attending the sessions.

The program was particularly well planned. There were two general sessions and four special sessions. On the occasion of the first general session, the Sedgwick Memorial Medal, awarded annually for distinguished service in public health, was presented to Brigadier General James Stevens Simmons, M.C., U.S.A., Director of the Preventive Medical Division of the Office of the Surgeon General, United States Army. The special sessions were of particular interest. The first, entitled "new ventures towards health security", reviewed the present situation in the United States, Canada, and Chile. The public health implications of tropical and imported diseases formed the subject of the second session, and the third was devoted to current health department problems in war. It was fitting that the fourth and concluding special session was devoted to "the evolving pattern of tomorrow's health".

Without question, the New York meeting was one of the most helpful that the Association has held.

Medical Economics

GROUP HOSPITALIZATION, A COMPLEMENT TO PUBLIC HEALTH SERVICES

FREDERICK BELL
Plan for Hospital Care
Toronto

ALTHOUGH not often thought of in that light, group hospitalization plans in various parts of the Dominion are, nevertheless, actually providing a very useful complement to Canadian public health services generally. By enabling Canadians in all walks of life, but more particularly the low-income worker, to obtain hospital care at minimum expense when needed, these plans are aiding materially in raising the general health standard of the population, thereby contributing to the reduction of the burden on community public health organizations. At a time when the services of these organizations are more important than ever before, and when the need for maintaining public health at a high peak is paramount if civic morale is to ride the crest, and if vital war production is to continue to flow unabated, the cumulative value of group hospitalization cannot be overestimated.

The prospect of an enforced stay in hospital has long been cause for worry and anxiety for the man and woman of limited financial means. Hospitalization expenses have always been a particular burden for those Canadians who constitute the low-income group of the population. It is easily understood why, when disease or illness threatened, many members of this group have in the past postponed the inevitable trip to hospital until the last possible moment. Often the procrastination caused by fear of incurring debt in the form of a heavy hospital bill has resulted in an aggravation of the individual's condition, which, in turn, has meant a longer stay in hospital than would otherwise have been the case, and, sometimes, actual loss of life. It is important to note that a fairly large percentage of industrial absenteeism can be directly attributed to the recurring, chronic illness of employees who delay in obtaining prompt hospital treatment for their ills.

Statistics show that each year one out of every five Canadian families requires hospital care in some degree, yet hospitalization is a contingency seldom provided for in advance. The finding of a method whereby the burden of hospital expense could be materially eased for the average Canadian working man and his family has been a long-term problem for both hospital and patient. Until the group hospitalization idea was evolved there were only two alternatives open to the low-income worker. Neither one was particularly attractive. He could, by independently paying his own way, see his hard-earned savings melt away before the onslaught of an unexpectedly heavy hospital bill, leaving him in more or less straitened circumstances. On the other hand, he could, by swallowing his natural pride, become at least a partial charge on the community by entering a so-called "charity" ward.

The simple and effective solution to the problem was found some fourteen years ago at a Texas University when a group of students had the happy idea of contributing money to a common pool from which each could draw when in need of hospital services. Since that time the growth of group hospitalization has been well-nigh phenomenal. Today seventy-seven hospital plans co-ordinated under the now familiar emblem of the Blue Cross serve more than 11,000,000 Americans and Canadians. Thousands of citizens of both countries are enrolled in similar allied hospitalization plans. The

rise of group hospitalization on the public-interest thermometer has been somewhat slower in Canada than in the United States, but the last two years have witnessed a tremendous acceleration in this direction. There are now Blue Cross hospitalization plans in operation in the provinces of Ontario, Quebec, Manitoba, and Nova Scotia, and on the lower mainland of British Columbia, as well as a number of community plans in existence in such metropolitan areas as Vancouver, Edmonton and Kamloops. A recent bill ratified in the Nova Scotia Legislature incorporating the Maritime Hospital Service Association as the plan supplying low-cost hospital service in that province also provided for the early extension of this plan to cover New Brunswick and Prince Edward Island as well. The keynote of the services supplied by these hospitalization plans, namely, the co-operation of employee, employer and hospital, a formula which has proved overwhelmingly effective, has been copied from those in operation in the U.S.A.

Plan for Hospital Care, which is sponsored by the Ontario Hospital Association, Inc., for the benefit of Ontario citizens, is a prototype of all the other existing plans in the Dominion and, as the largest of these, offers a fine example of co-operation for the common good. The Ontario Plan has well over 235,000 participants representing more than 122 separate communities in the province. The present rate of expansion is some 10,000 new participants per month.

The Plan holds a provincial charter incorporating it as a non-profit, co-operative community service inaugurated in the public interest through the hospitals represented in the Ontario Hospital Association, Inc. More than 150 hospitals in the province, including mental institutions and sanatoria, co-operate in making services available to Plan subscribers. Plan for Hospital Care was instituted with the complete co-operation and approval of the Ontario Department of Health and all rates and benefits are approved by the Ontario Minister of Public Health. The Plan formula has been endorsed in principle by the Executive of the Ontario Medical Association and by the Council of the Academy of Medicine, Toronto. The American Hospital Association has also given its official approval of the Plan.

Members of the Plan Board of Administration serve without remuneration and issue no dividends. Stockholders are non-existent, and all surpluses accrue to the benefit of subscribers only. The members of the Board are: G. Harvey Agnew, M.D., Secretary, Department of Hospital Science, Canadian Medical Association, Editor of The Canadian Hospital, and Past-President of the American Hospital Association; C. J. Decker, Superintendent, Toronto General Hospital; R. Fraser Armstrong, Superintendent, Kingston General Hospital; J. H. W. Bower, Superintendent, Hospital for Sick Children; J. Clark Keith, General Manager, Windsor Public Utilities; F. H. Holmes, Superintendent, St. Catharines General Hospital; A. J. Swanson, Superintendent, Toronto Western Hospital; F. Shannon, President, Automatic Paper Box Co., Ltd., and W. J. Bell Co., Ltd., Toronto; M. J. McHugh, M.D., Superintendent, Toronto Hospital for Consumptives and Queen Mary Hospital for Consumptive Children. The Ontario Medical Association also is represented on the Board.

Enrolment methods, rates and benefits have been carefully planned to give the worker the maximum amount of service at the minimum cost. The ruling is made definite that participants must be enrolled by group only and not as individuals. This makes it possible to obtain a fair, representative cross-section of the population in which the need for hospital service will not exceed the average, thereby affording equal protection to all subscribers. Enrolment in the Plan is made available to employee groups of five persons

or more. It is stipulated that all employees be enrolled if the staff numbers five to ten people; ten employees where there are twenty-five or less; and forty per cent of the staff where there are over twenty-five.

The Ontario Plan provides special facilities for the enrolment of members of established community organizations including professional associations (dentists, lawyers, doctors, etc.), Farmers' Co-operatives, Credit Unions, and similar bodies. At the present time a large number of rural groups are participating, among them 26 Women's Institutes, United Farm Young Peoples' Associations, commercial farming enterprises, and government agricultural stations. Practically every type of business and industry is represented among the subscriber groups — meat packers, heavy manufacturing and wartime industrial plants, as well as insurance agencies, educational institutions, federal and provincial government departments.

Through the co-operation of the Manitoba Hospital Service Association, fur traders and trappers employed by the Hudson's Bay Company in Ontario's far north are being enrolled in the Plan as far as Baffinland. Thus, these men who daily face the hazards common to their occupation are enabled to obtain hospital care for themselves and their families.

Ontario workers can, through Plan for Hospital Care, secure hospital services for less than two cents per day. The enrolled member of a subscriber group can safeguard his or her entire family (including husband, wife, and all children under 16 years of age) by subscribing less than three and a half cents a day. Adopted children and child war guests may also be included in the family contract if so desired. The monthly subscription for the individual participant amounts to fifty cents, which provides standard ward accommodation in the hospital. Semi-private ward service costs seventy-five cents a month. Parallel costs for the family are $1.00 and $1.50 a month. With the co-operation of employers these subscriptions are deducted from the participant's wages or salary. Some employers even arrange to pay part, or the entire subscription for their workers as a gesture of goodwill. In the town of Kapuskasing the practical method of adding Plan subscriptions to the monthly Hydro-Electric bill has met with great success.

No physical examination of the subscriber is required by the Plan, pre-existing and chronic conditions being equally covered and the rejected applicant for commercial insurance being considered quite eligible for enrolment. Many a subscriber has entered hospital and received full benefits within a few hours or days of being enrolled. Moreover, should a participant unexpectedly require hospitalization while outside the province or even in the United States, Plan for Hospital Care will pay for the necessary treatment in any public general hospital to the same extent as in co-operating hospitals in Ontario.

On entering hospital at an order from his personal physician, the Plan subscriber merely presents his identification card. There are no questions or legalities and no delay in providing the necessary facilities for treatment. The subscriber is entitled to twenty-one days of hospital care in each year. Each member of an enrolled family is also entitled to twenty-one days. If, for example, an entire family of five persons were admitted to hospital at one time, as the result of fire, accident, or epidemic, they would be entitled to a total of 105 days service in all. As the stay of the average patient in hospital is estimated to be approximately ten days, it is clear that the coverage supplied is ample.

Hospital benefits included in the subscriber's contract are: accommodation according to the specification of the contract; general nursing and dietary services; use of the operating room as often as necessary; use of anaesthesia

equipment and materials; electrocardiographic films; drugs and medications ordinarily supplied by the hospital dispensary; routine pathological, biochemical and basal metabolism tests; dressings and plaster cast materials, etc. Charges for the use of X-ray equipment and, of course, surgeons' and physicians' fees, are not covered by Plan for Hospital Care at the present time.

There is, however, no exclusion as to type of disease or illness treated. Epilepsy, mental disorders, tuberculosis, venereal diseases, and all the contagious diseases are equally covered. After twelve months' participation by husband and wife one-half the hospital charges (up to twelve days' stay in hospital) are paid for any conditions arising from pregnancy and childbirth —including one-half the charges for the use of the delivery room and nursing care for the newborn child.

The subscriber entails no loss of benefits through changing his occupation and thereby severing his connection with a particular enrolled group. Provided he maintains his subscription rate through quarterly, semi-annual or annual payments directly to the Plan, he and his family will be safeguarded as before. Enlisted men in the Canadian armed forces may continue to obtain benefits for their families during their absence in the same way, and their previous contracts protecting themselves may be resumed within thirty days of discharge from the service. Included in the long list of subscriber groups are a number of R.C.A.F. and R.A.F. units stationed in Ontario. Members of the last-named, it might be explained, are instruction personnel who are thus protecting the wives and children they have brought to Canada with them.

A most important fact is that a large percentage of Plan subscribers are workers in wartime industry. They are, through the facilities made available, able to get prompt, efficient treatment for their ills instead of having to wait until their resources are sufficient to cope with the emergency. The net result: healthier workers, less absenteeism, removal of nervous strain and worry, better workmanship, and the saving of thousands of vital man-hours each year.

Not only in Ontario, but in every part of the Dominion where group hospitalization plans are in operation, men and women have found how to throw off the burden of the unexpected hospital bill for themselves and their families. This is essentially the achievement of realistically applied co-operation. This co-operation put to work is daily contributing to the more effective working of our Canadian public health services; is a not inconsiderable factor in enabling our hospitals to function at the peak of efficiency in spite of the problems occasioned by the war; and, in the final analysis, is a definite milestone in humanity's slow journey along the road to social and economic security.

ASSOCIATION NEWS

THE CONFERENCE OF THE VITAL STATISTICS SECTION

A CONFERENCE of the Vital Statistics Section of the Association was held in the Chateau Laurier, Ottawa, on October 6, 1943, with the Chairman, Dr. F. S. Burke, of the Department of Pensions and National Health, presiding.

At the outset, the Chairman appointed a Nominating Committee composed of Dr. Mary A. Ross, Chairman, Dr. E. Couture and Mr. J. D. B. Scott, and a Resolutions Committee of Sqdn. Ldr. A. H. Sellers, Dr. Paul Parrot and Miss L. E. Stewart.

The Chairman introduced Dr. Halbert L. Dunn, Chief Statistician for Vital Statistics, United States Bureau of the Census, who addressed the Section on the subject of "Publications of the United States Bureau of the Census". There was a general discussion of Dr. Dunn's remarks.

The Chairman introduced Dr. A. O. Lemieux, Acting Chief, Census Branch, Dominion Bureau of Statistics, who delivered a paper on "Population Changes Revealed by the 1941 Census". The discussion of this paper was led by Dr. Ant. B. Valois, Demographer for the City of Montreal.

Sqdn. Ldr. A. H. Sellers gave a résumé of "The Contributions of the Vital Statistics Section to National Vital Statistics".

The Chairman thanked the speakers and it was recommended that the papers be published in subsequent issues of the JOURNAL.

Dr. Ross presented the Report of the Nominations Committee, and the following officers were duly elected for the year 1943-44:

Chairman: Dr. C. R. Donovan.
1st Vice-chairman: Mr. Donald MacKie.
2nd Vice-chairman: Dr. Paul Parrot.
Secretary: Mr. J. T. Marshall.
Section Council: Mr. E. S. Macphail (Life Member), Dr. Mary Ross (1944), Mr. G. L. Holmes (1945), Dr. J. Wyllie (1946), Dr. F. S. Burke (1947), Sqdn. Ldr. A. H. Sellers (1948), and Dr. L. A. Pequegnat (1949).

Sqdn. Ldr. A. H. Sellers presented the Report of the Resolutions Committee, and the following resolutions were adopted:

1. WHEREAS the Dominion-Provincial Conference on Vital Statistics shortly to be held is of the utmost national interest and importance from the standpoint of public health in Canada,

AND WHEREAS the constitution of the Conference further assures an opportunity for the full exchange of ideas by all groups concerned,

BE IT RESOLVED that this Section extend to the Dominion Bureau of Statistics and to the representatives at the Dominion-Provincial Conference on Vital Statistics its best wishes for the fullest success in the deliberations to be held.

BE IT RESOLVED FURTHER that this Section urge the Dominion Bureau of Statistics to hold such Conferences every two years, and whenever possible in conjunction or concurrently with meetings of this Section of the Canadian Public Health Association.

2. WHEREAS the education of medical students in the fundamental aspects of vital statistical practice is essential toward improving registration and certification in Canada,

AND WHEREAS the Physician's Handbook on Death Registration and Certification has proved of great value in the teaching of vital statistics in medical schools in Canada,

BE IT RESOLVED that this Section urge the Dominion Bureau of Statistics to republish the Physician's Handbook on Death Registration and Certification, in appropriately amended form, for this purpose.

3. WHEREAS it is recognized that local and provincial statistics must continue to be compiled on a current basis,

AND WHEREAS uniformity in such tabulation is most desirable,

AND WHEREAS a Canadian Manual for the International List would be advantageous in this direction,

BE IT RESOLVED that this Section urge the Dominion Bureau of Statistics to undertake the preparation of a Manual on the International List of Causes of Death, incorporating a tabular list, index and rules of selection being followed.

4. WHEREAS the Dominion Bureau of Statistics has continued to make further important contributions to national public health in the field of vital statistics,

BE IT RESOLVED that this Section extend to Prof. Cudmore and

his colleagues its appreciation and commendation of the achievements during the past year.

5. WHEREAS this Section has in the past made useful contributions in the field of vital statistics in Canada,

AND WHEREAS greater efforts are called for in the future in providing leadership and in serving as a clearing-house for ideas and plans in respect to the public health aspects of vital statistics,

BE IT RESOLVED that this Section extend its activities by setting up such additional nationally representative committees as may be required to continue to afford such assistance and leadership as may be indicated in respect to public health aspects of vital statistics, and that the intention of the Section be conveyed to the Executive Committee of the Association.

In accordance with the last resolution, the meeting then considered the composition of continuing committees of the Section and the establishment of new committees.

The following is a list of the Committees of the Vital Statistics Section, as revised for the year 1943-44:

A. *Committee on Certification of Causes of Death:*

Sqdn. Ldr. A. H. Sellers (Chairman), Mr. E. S. Macphail, Mr. J. D. B. Scott, Dr. M. R. Bow, Dr. Paul Parrot, P.O. E. Ashton, Dr. C. W. MacMillan, Miss W. O'Brien.

1. *Subcommittee on Stillbirth Registration and Certification:*

Dr. E. Couture, Major H. A. Ansley, Mr. Donald MacKie, Major N. R. Rawson, Dr. Paul Parrot, Mr. E. J. Picton, Sqdn. Ldr. A. H. Sellers.

2. *Subcommittee on Confidential Death Certification:*

Dr. Paul Parrot, Dr. G. F. Amyot, Dr. M. R. Bow, Dr. P. S. Campbell, Dr. R. O. Davison, Dr. R. D. Defries, Mr. G. L. Holmes, Dr. F. W. Jackson, Dr. L. A. Pequegnat, Dr. Mary Ross, Sqdn. Ldr. A. H. Sellers.

Working Group: Dr. Paul Parrot, P.O. E. Ashton, Major N. R. Rawson, Dr. P. S. Campbell, Sqdn. Ldr. A. H. Sellers.

3. *Subcommittee on Revision of International List of Causes of Death:*

Dr. J. Wyllie, Dr. F. G. Pedley, Dr. Maxwell Bowman, Dr. A. J. Slack.

B. *Committee on Form and Content of Annual Vital Statistics Reports:*

Mr. J. D. B. Scott (Chairman), Dr. Mary Ross, Dr. Ant. B. Valois.

C. *Committee on Rules of Vital Statistical Practice:*

Dr. Paul Parrot, Dr. H. Robertson, Mr. Donald MacKie, Mr. J. T. Marshall.

D. *Committee on Residence Allocation:*

P.O. E. Ashton, Dr. D. V. Currey, Dr. Paul Parrot, Miss I. Moffatt.

E. *Committee on Membership and Archives:*

Mr. J. D. B. Scott, Dr. Mary Ross, Dr. D. V. Currey.

F. *Committee on Morbidity Classification and Statistics:*

Dr. F. S. Burke, P.O. E. Ashton, Mr. J. T. Marshall, Sqdn. Ldr. A. H. Sellers, Major Neil McKinnon.

The meeting adjourned at 5.30 p.m. and reconvened at 8 p.m. at the Census Branch of the Dominion Bureau of Statistics, when a demonstration of Census air-tabulators was given through the courtesy of Prof. S. A. Cudmore, Dominion Statistician.

The attendance at the meeting was twenty-seven.